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National Aeronautics and
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Goddard Space Flight Center
Greenbelt, Maryland 20771

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REMOTE MEASUREMENTS OF SOIL MOISTURE
BY MICROWAVE RADIOMETERS AT BARC
TEST SITE, III

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J. Fuchs, W. Glazar, P. O'Neill, T. Schmugge,
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ABSTRACT

Remote measurements of soil moisture by truck-mounted microwave radiometers at the frequencies of 1.4 GHz, 5 GHz, and 10.7 GHz were made over two test sites at Beltsville, MD during July-September of 1981. The soil textures in the two test sites were different so that the soil type effect of microwave radiometric response could be studied. Several fields in each test site were prepared with different surface roughnesses and vegetation covers. Ground truth on the soil moisture and temperature, as well as the biomass of the vegetation was acquired in support of the microwave radiometric measurements. Soil bulk density for each of the fields in both test sites was sampled several times during the course of the experiment. Mechanical and chemical analyses of the soils in both sites were done with conventional methods. This document gives a tabulation of the measured data and a brief discussion of the sensors as well as operational problems associated with the measurements.

1. Introduction

An experiment on the remote sensing of soil moisture content by microwave radiometer was conducted over two test sites in Beltsville, Maryland during June-September of 1981 by personnel from both NASA/Goddard Space Flight Center and USDA/Beltsville Agricultural Research Center. The experiment was supported by the AgRISTARS (Agriculture and Resources Inventory Surveys Through Aerospace Remote Sensing) program. The major objectives of the experiment were to study the effects of soil texture, surface roughness, and vegetation cover on the remote estimate of soil moisture content by microwave radiometers. This report contains the reduced data in tabulated form obtained from the experiment.

Similar experiments were conducted in both 1979 and 1980. The experimental procedure, sensor package, sensor calibrations, ground truth data acquisition, and data reduction of those experiments were described in detail by Wang, et al., (1980a, 1982). In the 1981 experiment, however, the soils in the two test sites were of different textures and covered a much wider range of surface roughness. Therefore, the following description of the experiment will emphasize these new features and those items considered necessary for the completeness of the report.

2. Microwave Sensor Systems and Calibration

Three microwave radiometers at the frequencies of 1.4 GHz, 5 GHz, and 10.7 GHz were mounted on a mobile tower and used in the 1981 field measurements. Another one at 0.6 GHz was mounted on a heavy-duty truck with a beam extendable to ~24 m. These radiometers were of the Dicke type and measured thermal microwave emission in both vertical and horizontal polarizations almost simultaneously. The 1.4 GHz and 5 GHz radiometers were the same ones used in the 1980 measurements (Wang, et al., 1982). The 10.7 GHz radiometer had a circular horn antenna. The signal collected by the antenna was split into vertical and horizontal polarizations by waveguides. The 0.6 GHz radiometer antenna was a circular dish about 2.5 m in diameter. At the focus of the

dish were two dipole feeds detecting signals in vertical and horizontal polarizations. All four radiometers had a comparable beamwidth of 13° .

Absolute calibrations of 1.4 GHz, 5 GHz, and 10.7 GHz radiometers were made by pointing the radiometer antennas at three external targets whose brightness temperatures can be either calculated or measured accurately, namely, Eccosorb slabs, sky and a calm water surface. The Eccosorb slabs are 23 cm thick and have an absorption coefficient of 0.99 at 1.4 GHz frequency. They adequately provide a calibration target at ambient temperature for all three radiometers. The calm water surface gives a range of brightness temperatures depending on incidence angle θ , which can be calculated fairly accurately knowing the water temperature and the dielectric relaxation spectrum (Lane and Saxton, 1952). The sky brightness temperatures in zenith direction at 1.4 GHz and 5 GHz frequencies are calculated to be 4.9 K and 5.2 K respectively and do not change by more than 0.2 K when the amount of atmospheric water vapor content is varied from 0.5 cm to 3.55 cm. At 10.7 GHz the calculated brightness temperatures vary from 5.9 K to 7.4 K over the same range of atmospheric water vapor content. These small changes in sky brightness due to atmospheric water vapor variations do not seriously affect the sensor calibrations at any of the three frequencies.

The results of radiometer calibrations are given in Figure 1 where the known target brightness temperature T_{BP} are plotted as a function of normalized antenna voltage N_p (subscript P stands for either V for vertical polarization or H for horizontal polarization. N_p is given by

$$N_p = \frac{V_A - V_H}{V_C - V_H} \quad (1)$$

Here V_A is the output voltage of a radiometer when the antenna is pointing at an external target. V_H and V_C are the output voltages when the radiometer is looking at internal hot and cold reference loads respectively. Applying a linear regression to the calibration data shown in Figure 1 gives the dependence of T_{BP} on N_p for each of the three radiometers as:

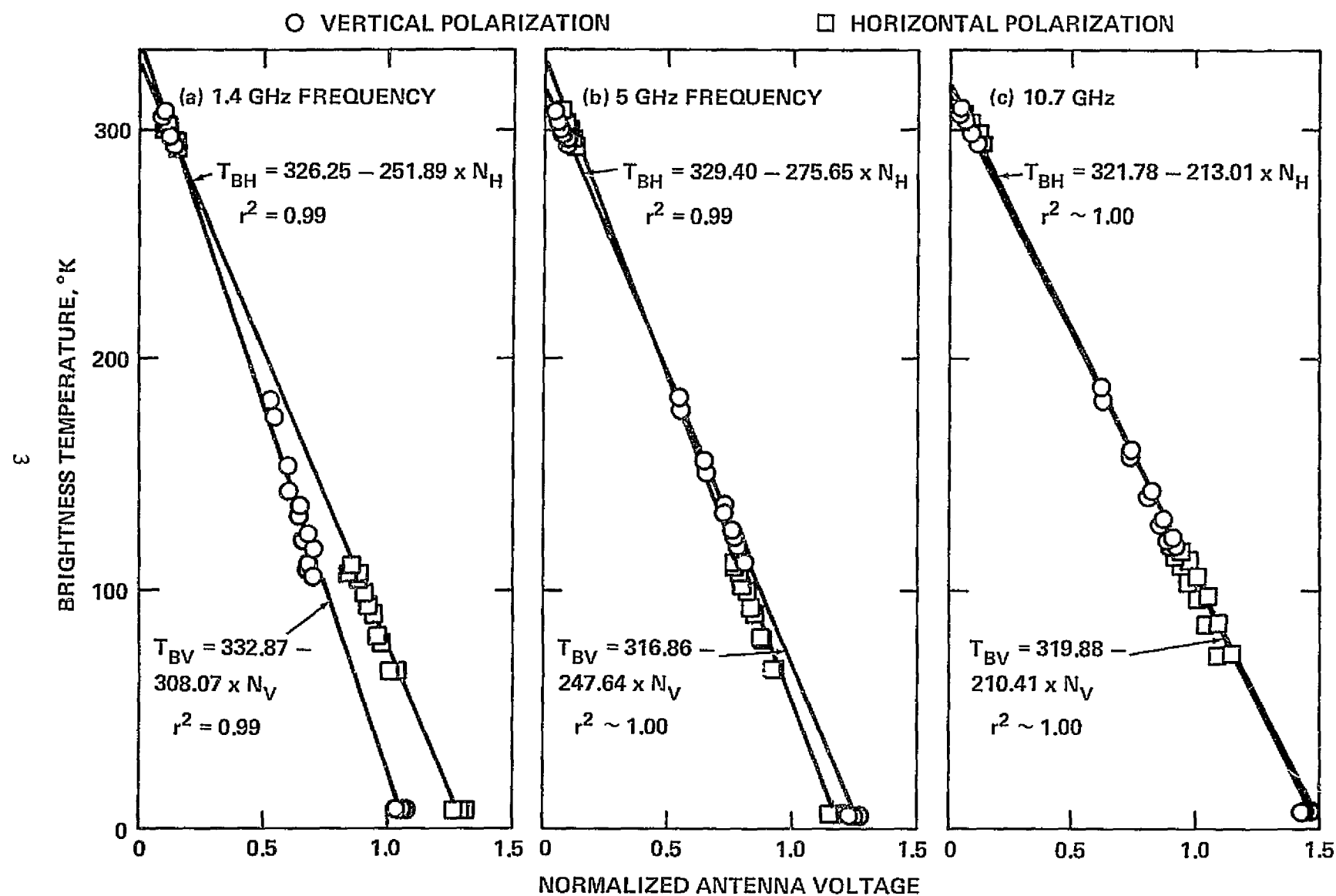


Figure 1. The Calibration Results of Microwave Radiometers at (a) 1.4 GHz, (b) 5 GHz, and (c) 10.7 GHz Frequencies.

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at 1.4 GHz frequency,

$$T_{BV} = 332.9 - 308.1 N_V \quad (2)$$

$$T_{BH} = 326.25 - 251.9 N_H \quad (3)$$

at 5 GHz frequency,

$$T_{BV} = 316.9 - 247.6 N_V \quad (4)$$

$$T_{BH} = 329.4 - 275.7 N_H \quad (5)$$

at 10.7 GHz frequency,

$$T_{BV} = 319.9 - 210.4 N_V \quad (6)$$

$$T_{BH} = 321.8 - 213.0 N_H \quad (7)$$

These equations are used to obtain the calibrated T_{BP} 's. The estimated accuracy of the calibrated T_{BP} 's is about $\pm 3K$ at all three frequencies.

Because of its small thickness, the Eccosorb slabs were not used for the 0.6 GHz radiometer calibration. Instead the connectors to the antenna feeds were terminated with 50 ohm leads and calibration was made with loads at ambient air temperature, room and ice water temperatures, and liquid nitrogen temperature. These calibration measurements are shown in Figure 2 together with those of sky and calm water surface. A linear regression of these data points gives:

$$T_{BV} = 303.2 - 268.8 N_V \quad (8)$$

$$T_{BH} = 305.1 - 266.7 N_H \quad (9)$$

Based on these calibration data, it was estimated that the accuracy of the 0.6 GHz radiometer measurements was about $\pm 5 K$.

3. Field Description and Operation

Two test sites managed by USDA Beltsville Agricultural Research Center were selected for the 1981 microwave radiometric measurements. The first site is the same as that used for the previous measurements (Wang, et al., 1980a, 1982) and contains an Elinsboro sandy loam soil with 0 - 2% slopes. Four 18.3 m X 18.3 m plots (111, 121, 131, 161) and one 18.3 m X 12.2 m (152) plot

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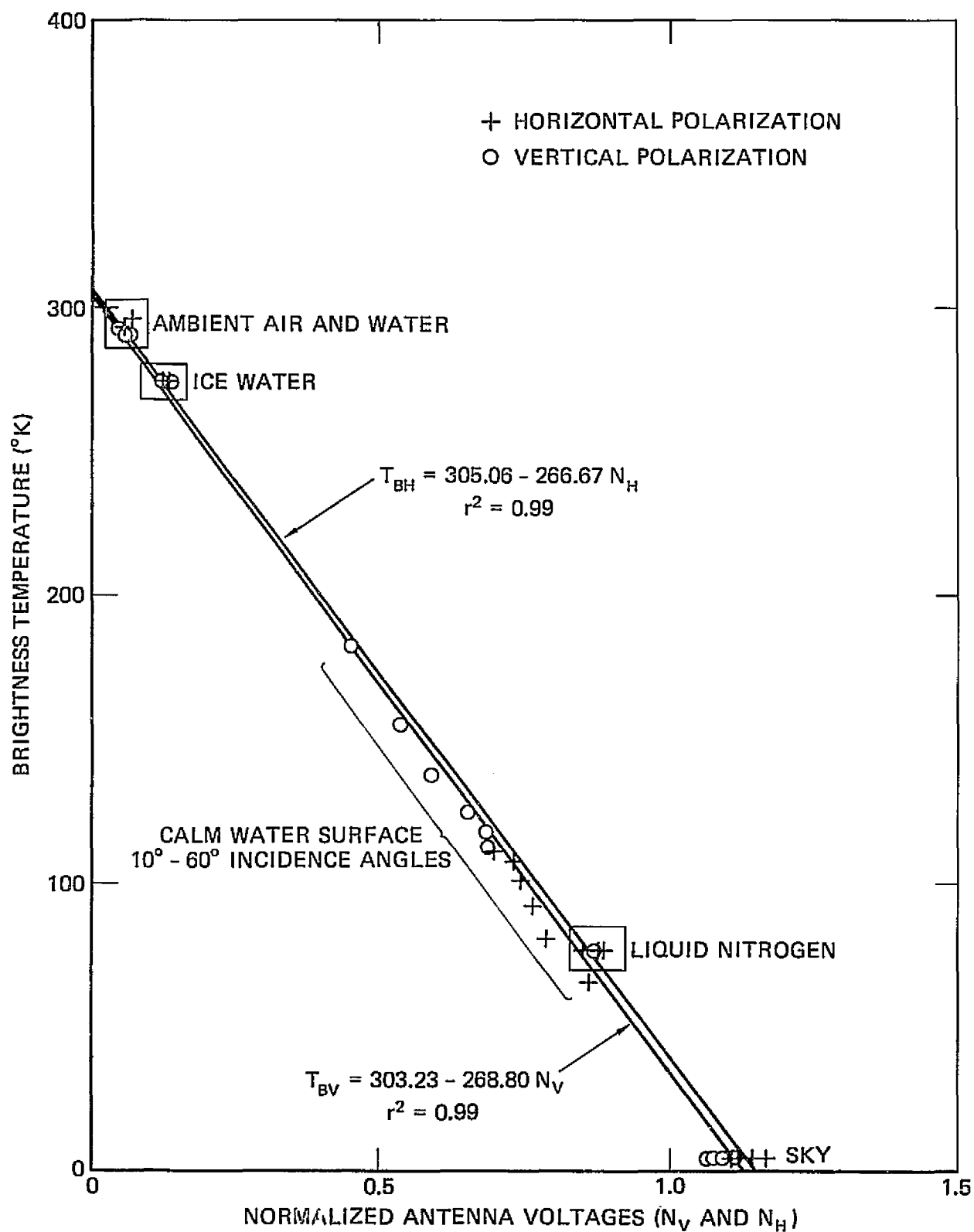


Figure 2. The Calibration Results of the 0.6 GHz Microwave Radiometer.

were prepared for the measurements. The layout of these plots is shown in Figure 3. Plot 152 was planted with orchardgrass (*Dactylis glomerata* L.) on April 23, 1981, Plot 111 with Saranac AR alfalfa (*Medicago sativa* L.) on April 24, Plot 131 with S. S. 335A corn on June 9, and Plot 161 with Williams soybean on June 17. Plot 121 was kept free of vegetation during the entire measurement period. The second site has a Mattapex silt loam soil with about 2% slope and is moderately eroded. Sub-soil layers are a silty clay loam that is sticky and slightly plastic. The soil is moderately well drained. Plot 231 was planted with corn (*Zea mays* L.) on June 9 and Plot 261 with soybean (*Glycine max.* L) on June 17. Plots 221 and 223 were kept bare, but with different surface roughnesses. One 18.3 m X 12.2 m plot (291) was planted with winter wheat (*Triticum testiuam* L.) on October 14, 1980. The entire plot layout is shown in Figure 4. Table 1 summarizes the field procedures applied to the plots in both test sites.

Prior to planting, the soils were limed and fertilized according to recommended rates. Tillage and planting were accomplished by conventional practices. Herbicides were applied at planting to control weeds. Row crops were planted in an east-west direction with 76 cm between rows for corn and 61 cm for soybeans. Within row spacing was approximately 23 cm for corn and 5 cm for soybeans. On July 7, 1981 the bare plot 223 at the second site was roughened with a turn plow and the bare plot 221 was tilled and smoothed. The bare plot 121 at the first site was maintained in a smooth condition all the time.

The radiometric measurements over a given field were made at incidence angles ranging from 10° to 70° in 10° steps. The measurements at 0° incidence were not made because of the radiometers' self-emission problem observed in the previous experiment (Wang, et al., 1980b). The radiometer systems were maneuvered such that the main beams of the radiometer antennae always aimed at the same spots regardless of incidence angles. This maneuvering was accomplished by placing a marker on a spot which was then monitored by a TV camera mounted on the platform of the truck. Measurements by this approach minimized the variations in the radiometric outputs due

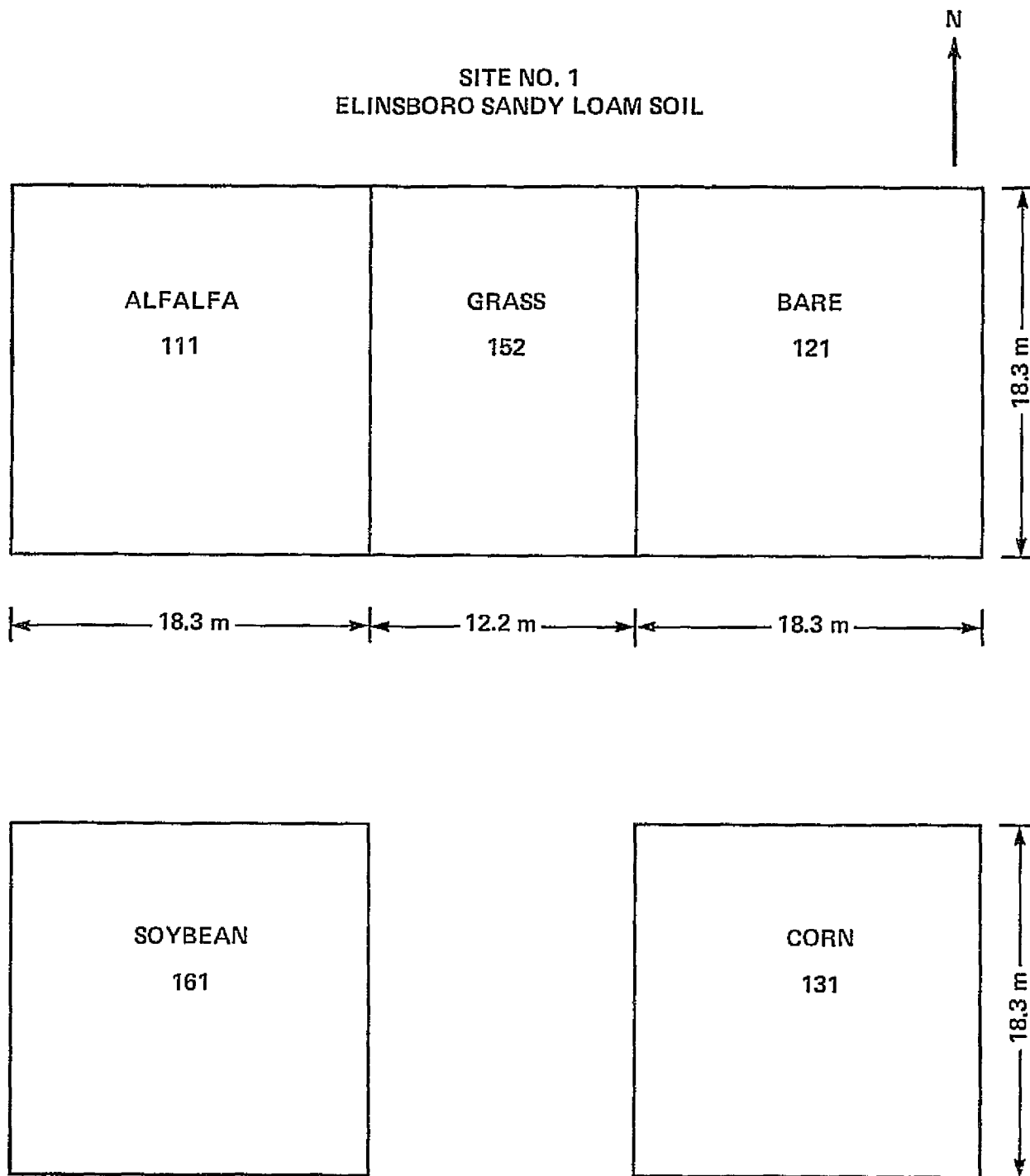


Figure 3. A Sketch of Field Arrangement at Test Site No. 1.

SITE NO. 2
MATTAPEX SILTY LOAM SOIL



| | | |
|------------------------|------------------------|-------------------------|
| BARE (ROUGH) 223 | WINTER WHEAT 291 | BARE (SMOOTH) 221 |
| SOYBEAN 261 | | CORN 231 |

Figure 4. A Sketch of Field Arrangement at Test Site No. 2.

to the field inhomogeneities. The entire measurements covered a 3-month period from June 22 to September 30, 1981.

Table 1
1981 Harvest Season Field Procedure Dates For Microwave Studies

| Date | Procedure |
|----------|--|
| 10/14/80 | 18.3 m X 12.2 m plot planted in Arthur Wheat (plot 291) |
| 4/ 3/81 | All plots plowed or roto-tilled |
| 4/23/81 | Planted orchardgrass in 18.3 m X 12.2 m plot (152) |
| 4/24/81 | Planted Saranac AR alfalfa in 18.3 m X 18.3 m plot (111) |
| 5/19/81 | Inter/re-seeded Saranac AR alfalfa in 18.3 m X 18.3 m plot (111) |
| 6/ 9/81 | Planted 90 day corn in 18.3 m X 18.3 m plots (131 and 231) |
| 6/17/81 | Planted Soybeans in 18.3 m X 18.3 m plots (161 and 261) |
| 7/ 1/81 | Harvested wheat in 18.3 m X 12.2 m plot (291) |
| 7/ 7/81 | Roughened 18.3 m X 18.3 m bare plot area (223) |
| 7/ 9/81 | Clipped wheat to stubble (291) |
| 7/29/81 | Replanted soybeans in 18.3 m X 18.3 m plot (161) |
| 7/30/81 | Clipped alfalfa and orchardgrass and sprayed paraquat on alfalfa stubble (111 and 152) |
| 8/18/81 | Sprayed paraquat on bare plots (111, 221 and 223) |
| 9/ 3/81 | Mowed 18.3 m X 12.2 m wheat stubble plot (291) |

Concurrent with radiometric measurements two soil samples within the footprint of the sensors were measured gravimetrically for moisture content at the depths of 0-0.5 cm, 0-2.5 cm, 2.5-5.0 cm, and 5.0-10.0 cm. Ambient temperature (or canopy temperature in the case of vegetated field) was measured by a thermometer and the soil temperature at the depth of 0.25 cm, 1.25 cm, 2.5 cm, 7.5 cm, and 15.0 cm was measured by Omega platinum resistance probes. More extensive soil sampling covering the entire field uniformly and extending to deeper layers were made within ± 1

hours of radiometric measurements as discussed in the next section. Profiles of surface roughness were measured at two different locations for each of the three bare plots. These profiles were obtained by driving grided panels into the soil and taking photos as shown in Figure 5. The deviations of the roughness profiles from the mean surface were measured from the photographs at 0.5 cm intervals. These deviations were averaged to arrive at a RMS roughness σ . The average σ 's for the bare plots 121, 221, and 223 were 0.21 cm, 0.73 cm, and 2.45 cm, respectively.

4. Extensive Ground Truth Acquisition and Processing

The ground data collection program to support the 1981 BARC microwave truck experiments emphasized detailed soil moisture measurements and general climatic data.

4.1 Soil Moisture Sampling

In addition to the two soil samples mentioned earlier which were taken concurrently with the radiometric measurements, soil moisture was also determined by gravimetric sampling at six locations within each plot and at four depths (0-2 cm, 2-4 cm, 4-10 cm and 10-16 cm) per location. Data collection was made within one hour of the microwave measurements from the trucks. Precise bulk density measurements were made in each plot several times during the experimental season, approximately every 2-3 weeks. The bulk density was determined for each of the depth layers that the gravimetric soil moisture was determined. The procedure used for determining bulk density is described below.

The technique is based on a volumetric displacement procedure that utilizes a specially designed bulk density ring with a hook gage and three one-foot long bolts. The bulk density ring is placed on the ground and secured by driving in the three bolts. A sheet of plastic film is used to line the inside of the cylinder. Using a water filled 500ml graduated cylinder, the bulk density cylinder is filled to the hook gage and the quantity of water is recorded. This is returned to the graduated cylinder. The soil from the inside of the bulk density ring is then dug out to the desired

depth of measurement and placed in a scaled container. The plastic liner is replaced and the ring is filled again. This amount of water is recorded. The soil wet and then dry weights are measured. The volume of soil removed is equal to the difference between the two water volumes used to fill the bulk density ring. The bulk density is computed by dividing the dry weight by this volume.

In general, only one sample was taken each date. To assess the reliability of these data, an experiment was conducted in which 16 samples were collected for each layer of the tall orchard-grass plot. The results of this experiment, shown in Table 2, indicate that the range and standard deviation are consistent with depth. Based upon these results, each individual bulk density sampled was compared to other samples obtained for the plot in order to smooth the results and identify outliers.

All of the data collected over the experimental period were plotted and a value of the bulk density was estimated for each period when conditions were the same. In some cases values had to be extrapolated or interpolated. Results are summarized in Table 3.

Table 2
Bulk Density Statistics for 30cm Orchardgrass Plot
(16 samples per depth)

| Depth Interval | Bulk Density | | |
|-------------------|--------------|------------------------|-----------|
| | Mean | Standard Deviation | Range |
| --cm-- | | --g/cm ³ -- | |
| 0-2.5 | 1.28 | 0.10 | 1.00-1.39 |
| 2.5-5 | 1.44 | .06 | 1.31-1.53 |
| 5-10 | 1.53 | .10 | 1.40-1.67 |
| 10-15 | 1.70 | .11 | 1.44-1.89 |

Table 3
Bulk Density Values at BARC Plots

| Site | Plot | Cover | Date | Bulk Density in Interval | | | |
|------------|------|----------|-----------|--------------------------|-------|------|---------|
| | | | | 0-2.5 | 2.5-5 | 5-10 | 10-15cm |
| | | | | g/cm ³ | | | |
| Edmonston | 111 | Alfalfa | All | 1.30 | 1.30 | 1.50 | 1.50 |
| | 121 | Bare | All | 1.20 | 1.12 | 1.19 | 1.49 |
| | 131 | Corn | All | 1.20 | 1.20 | 1.20 | 1.20 |
| | 152 | Grass | All | 1.22 | 1.48 | 1.55 | 1.68 |
| | 161 | Soybeans | Pre-7/21 | 1.31 | 1.26 | 1.36 | 1.46 |
| | | | Post-7/21 | 1.13 | 1.07 | 1.09 | 1.16 |
| South Farm | 221 | Bare | All | 1.22 | 1.22 | 1.22 | 1.22 |
| | 223 | Bare | Pre-7/18 | 1.44 | 1.34 | 1.39 | 1.50 |
| | | | Post-7/18 | 1.15 | 1.10 | 1.20 | 1.28 |
| | 231 | Corn | All | 1.52 | 1.52 | 1.52 | 1.52 |
| | 261 | Soybeans | All | 1.25 | 1.25 | 1.25 | 1.25 |
| | 291 | W. Wheat | All | 1.35 | 1.52 | 1.68 | 1.68 |

At each of the six sites on each plot, a sample of approximately 100 grams was taken for each of the four depths. The samples were carved from the face of a shallow hole with a special sampling tool. The sample was placed in a prelabeled plastic jar and sealed with a moisture tight lid. The samples were taken into the lab and weighed (wet weight) that same day. The samples were then oven dried for 80 minutes in a microwave oven and the samples were weighed again (dry weight). All containers weighed within ± 0.01 gms of each other, which was considered to be constant. These three weights (wet weight, dry weight, container weight) were punched on cards with the proper date and plot identification information for computer calculation of soil moisture. Volumetric soil

moisture is calculated by the following

$$\theta_v = \left(\frac{\text{wet weight} - \text{dry weight}}{\text{dry weight} - \text{container weight}} \right) D_b \quad (1)$$

where D_b is the bulk density. The results are tabulated in Appendix A.

4.2 Climatic Data

Climatic data consisting of rainfall, temperature, humidity, total wind movement and pan evaporation were measured at the Edmonston site. Only rainfall, air temperature and relative humidity data were recorded for the south farm site. Although separated by more than one mile, additional data collected at the Edmonston site were also considered representative of the South Farm sites. The results are summarized in Appendix B.

4.3 Mechanical and Organic Content Analyses of Soils

Four samples were taken from each depth interval on the bare soil plots at the Edmonston Road and South Farm sites. The Cooperative Extension Service Soil Testing Laboratory at the University of Maryland analyzed the samples to determine the textural percentages and organic matter content. The results of these tests are presented in Table 4.

4.4 Moisture-Tension Observations

Porous cup type tensiometers with pressure gages were installed at the Edmonston site in one of the corn plots at depths of 30, 45, and 75 cm. Two tensiometers were installed at the 30 cm depth, one in the corn row and one in the furrow between the rows. All of the deeper depths were samples in the furrow. Observed values are listed in Appendix B.

4.5 Agronomic Data

Mean values of 10 plant samples were taken on each date for biomass data, on corn and soybeans. Ten .25 m² area's were sampled for each date for orchardgrass and alfalfa. All agronomic data was adjusted to a square meter basis from counts of plants and forage per unit area. Green

biomass measurements were made by harvesting the entire above ground portions of plants. Fresh green weight of the harvested material was recorded. Samples were oven dried, at a temperature of 68 C for 72 hours, to 0% moisture and reweighed to obtain dry biomass weight and water content. LAI measurements were not taken this year, due to instrument break down. The results are summarized in Appendix C.

Table 4
Texture and Organic Content Data for BARC Test Sites

| Area | Depth | Texture | Organic Matter | Sand | Silt | Clay |
|------------|-------|------------|----------------|------|------|------|
| | cm | | | % | | |
| Edmonston | 0-5 | Sandy Loam | 1.4 | 67 | 19 | 15 |
| | 5-10 | Sandy Loam | 1.4 | 68 | 19 | 14 |
| | 10-15 | Sandy Loam | 1.4 | 67 | 19 | 15 |
| | 15-30 | Sandy Loam | 1.2 | 68 | 18 | 15 |
| South Farm | 0-5 | Loam | 1.3 | 31 | 45 | 25 |
| | 5-10 | Loam | 1.2 | 34 | 43 | 24 |
| | 10-15 | Loam | 1.2 | 34 | 42 | 24 |
| | 15-30 | Loam | 1.1 | 31 | 44 | 26 |

5. Summary

The data collected by microwave radiometers were processed in a similar manner to that described by Wang et al. (1980a), based on the calibration results of Figures 1 and 2 in Section 2. The calibrated brightness temperatures at all four frequencies, the soil moisture, and the soil temperature data are all listed in Appendices D and E. Appendix D contains the data obtained from the first site where the soil is Elinsboro sandy loam. The data collected from the second site with Mattapex silty loam are summarized in Appendix E. Both soil moisture and temperature data in these two

appendices were taken concurrently with the radiometric measurements. The soil samples for moisture content determination were taken within the footprint of the sensors. The 0.6 GHz radiometer was operating only during the period from August 27 to September 30 of 1981. The measurements at this frequency were made only at the first site.

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FIGURE CAPTIONS

Figure 1. The calibration results of microwave radiometers at (a) 1.4 GHz, (b) 5 GHz, and (c) 10.7 GHz frequencies.

Figure 2. The calibration results of the 0.6 GHz microwave radiometer.

Figure 3. A sketch of field arrangement at test site no. 1.

Figure 4. A sketch of field arrangement at test site no. 2.

APPENDIX A
EXTENSIVE SOIL MOISTURE DATA

Table A
Volumetric Soil Moisture

| Field | Date | Depth (cm) | | | | | | | |
|-------|---------|------------|---------|--------|---------|--------|---------|--------|---------|
| | | 0-2 | | 2-4 | | 4-10 | | 10-16 | |
| | | Mean | Std Dev | Mean | Std Dev | Mean | Std Dev | Mean | Std Dev |
| 111 | 6/22/81 | 8.096 | 1.282 | 12.664 | 1.227 | 16.586 | 0.866 | 17.684 | 0.863 |
| 121 | 6/22/81 | 7.399 | 2.787 | 11.299 | 0.634 | 13.782 | 0.866 | 18.330 | 1.755 |
| 152 | 6/22/81 | 6.700 | 0.475 | 7.508 | 0.431 | 7.182 | 0.833 | 9.781 | 1.601 |
| 161 | 6/22/81 | 9.706 | 3.090 | 16.076 | 2.671 | 19.513 | 2.542 | 22.145 | 3.091 |
| 163 | 6/22/81 | 9.125 | 2.165 | 14.277 | 1.092 | 17.590 | 1.316 | 20.230 | 0.986 |
| 191 | 6/22/81 | 14.505 | 2.566 | 18.987 | 2.358 | 17.008 | 2.072 | 18.253 | 2.344 |
| 111 | 6/23/81 | 5.852 | 1.285 | 11.840 | 0.690 | 15.875 | 0.472 | 18.088 | 2.893 |
| 121 | 6/23/81 | 4.717 | 1.160 | 10.700 | 1.391 | 13.501 | 1.554 | 18.381 | 2.189 |
| 131 | 6/23/81 | 6.963 | 1.560 | 12.207 | 1.006 | 14.315 | 0.970 | 15.875 | 0.590 |
| 152 | 6/23/81 | 3.407 | 1.265 | 6.091 | 0.667 | 7.337 | 1.114 | 7.736 | 0.975 |
| 161 | 6/23/81 | 10.531 | 2.892 | 16.096 | 3.058 | 19.847 | 3.853 | 22.759 | 4.329 |
| 191 | 6/23/81 | 13.180 | 3.071 | 17.510 | 3.098 | 16.359 | 2.633 | 18.485 | 2.582 |
| 111 | 6/24/80 | 4.654 | 0.566 | 11.216 | 0.672 | 15.493 | 0.955 | 16.386 | 1.044 |
| 121 | 6/24/80 | 4.906 | 1.558 | 10.191 | 1.338 | 13.274 | 1.427 | 18.038 | 2.065 |
| 131 | 6/24/81 | 5.179 | 0.884 | 12.201 | 1.788 | 14.221 | 1.694 | 15.798 | 1.430 |
| 152 | 6/24/80 | 3.535 | 1.101 | 5.789 | 1.112 | 6.501 | 1.075 | 7.431 | 1.267 |
| 161 | 6/24/81 | 9.538 | 4.518 | 14.994 | 3.811 | 19.181 | 2.954 | 22.088 | 3.662 |
| 191 | 6/24/80 | 9.960 | 3.880 | 14.953 | 2.861 | 14.381 | 2.552 | 16.486 | 2.928 |
| 223 | 6/29/81 | 11.041 | 3.752 | 17.376 | 1.397 | 21.287 | 0.434 | 24.853 | 0.514 |
| 261 | 6/29/81 | 9.964 | 1.705 | 18.300 | 1.025 | 21.016 | 0.646 | 22.937 | 0.891 |
| 291 | 6/29/81 | 16.885 | 4.482 | 22.003 | 3.469 | 27.226 | 2.547 | 28.954 | 1.264 |
| 223 | 6/30/81 | 9.514 | 2.971 | 17.983 | 0.623 | 21.873 | 0.641 | 25.708 | 0.436 |
| 261 | 6/30/81 | 9.736 | 1.987 | 18.600 | 1.838 | 20.666 | 1.710 | 22.223 | 1.764 |
| 291 | 6/30/81 | 17.299 | 5.276 | 20.573 | 4.078 | 26.018 | 3.908 | 28.509 | 4.042 |
| 221 | 7/ 6/81 | 24.729 | 1.597 | 27.639 | 7.056 | 26.131 | 2.021 | 26.624 | 2.519 |
| 223 | 7/ 6/81 | 26.650 | 2.628 | 23.924 | 1.271 | 26.952 | 0.624 | 30.373 | 0.806 |
| 231 | 7/ 6/81 | 29.704 | 1.130 | 30.245 | 1.394 | 30.602 | 1.765 | 31.274 | 2.384 |
| 261 | 7/ 6/81 | 25.564 | 1.812 | 24.354 | 1.328 | 25.912 | 1.903 | 26.371 | 1.279 |
| 291 | 7/ 6/81 | 28.798 | 1.635 | 30.638 | 1.272 | 34.966 | 0.720 | 35.694 | 1.817 |
| 221 | 7/ 7/81 | 16.980 | 3.821 | 23.682 | 2.611 | 24.287 | 2.011 | 25.089 | 2.292 |
| 223 | 7/ 7/81 | 13.104 | 2.313 | 18.417 | 1.266 | 22.469 | 1.045 | 23.762 | 1.657 |
| 231 | 7/ 7/81 | 28.659 | 2.353 | 28.295 | 1.734 | 28.623 | 2.999 | 29.492 | 1.115 |
| 261 | 7/ 7/81 | 20.848 | 1.759 | 23.192 | 2.012 | 24.398 | 1.478 | 24.524 | 1.186 |
| 291 | 7/ 7/81 | 26.885 | 0.781 | 28.571 | 3.111 | 33.498 | 2.508 | 34.107 | 2.275 |
| 221 | 7/ 8/81 | 15.431 | 4.647 | 21.987 | 3.236 | 22.698 | 2.365 | 24.738 | 2.394 |
| 223 | 7/ 8/81 | 9.303 | 1.917 | 16.078 | 1.916 | 19.516 | 2.358 | 22.563 | 2.781 |
| 231 | 7/ 8/81 | 22.048 | 2.195 | 24.667 | 1.622 | 26.182 | 0.898 | 26.960 | 0.578 |
| 261 | 7/ 8/81 | 8.029 | 1.976 | 14.681 | 6.733 | 20.408 | 2.496 | 23.045 | 1.911 |
| 291 | 7/ 8/81 | 25.986 | 1.788 | 28.652 | 1.991 | 32.732 | 2.606 | 32.678 | 3.333 |
| 111 | 7/13/81 | 1.618 | 0.509 | 5.242 | 2.262 | 8.016 | 0.807 | 8.646 | 1.577 |
| 121 | 7/13/81 | 4.171 | 1.088 | 9.777 | 1.002 | 12.897 | 1.176 | 17.501 | 1.411 |
| 131 | 7/13/81 | 7.187 | 1.680 | 11.041 | 0.856 | 13.226 | 1.227 | 14.194 | 1.349 |
| 152 | 7/13/81 | 3.601 | 0.673 | 5.484 | 1.019 | 6.603 | 1.280 | 7.666 | 1.261 |
| 161 | 7/13/81 | 8.346 | 2.850 | 14.513 | 2.661 | 21.929 | 10.755 | 16.646 | 3.009 |

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Table A. (Continued)

| Field | Date | Depth (cm) | | | | | | | |
|-------|---------|------------|---------|--------|---------|--------|---------|--------|---------|
| | | 0-2 | | 2-4 | | 4-10 | | 10-16 | |
| | | Mean | Std Dev | Mean | Std Dev | Mean | Std Dev | Mean | Std Dev |
| 111 | 7/14/81 | 2.019 | 1.029 | 5.330 | 1.405 | 7.781 | 1.803 | 8.577 | 2.350 |
| 121 | 7/14/81 | 4.129 | 2.084 | 10.193 | 0.727 | 12.462 | 2.183 | 17.563 | 2.040 |
| 131 | 7/14/81 | 5.733 | 1.293 | 9.872 | 0.964 | 11.222 | 0.915 | 12.012 | 1.175 |
| 152 | 7/14/81 | 3.243 | 0.916 | 5.073 | 0.885 | 7.131 | 1.444 | 7.963 | 1.611 |
| 161 | 7/14/81 | 9.466 | 2.320 | 14.597 | 3.233 | 18.073 | 3.074 | 16.310 | 2.579 |
| 111 | 7/21/81 | 16.645 | 2.450 | 15.181 | 1.566 | 16.280 | 1.998 | 11.965 | 1.523 |
| 121 | 7/21/81 | 10.989 | 1.008 | 13.564 | 1.657 | 16.096 | 2.103 | 19.646 | 3.063 |
| 131 | 7/21/81 | 13.476 | 0.892 | 13.497 | 0.876 | 13.381 | 0.971 | 11.830 | 1.558 |
| 152 | 7/21/81 | 16.704 | 0.454 | 16.153 | 0.813 | 15.047 | 0.984 | 13.115 | 2.442 |
| 161 | 7/21/81 | 19.265 | 2.787 | 17.434 | 2.639 | 19.957 | 3.494 | 16.086 | 2.763 |
| 111 | 7/22/81 | 11.787 | 1.500 | 11.459 | 1.231 | 13.463 | 1.316 | 12.300 | 1.449 |
| 121 | 7/22/81 | 5.962 | 1.048 | 10.091 | 1.650 | 13.384 | 1.586 | 18.128 | 2.146 |
| 131 | 7/22/81 | 8.904 | 1.666 | 11.711 | 0.996 | 11.915 | 1.367 | 11.843 | 0.874 |
| 152 | 7/22/81 | 12.985 | 1.375 | 14.182 | 1.229 | 14.208 | 0.716 | 13.899 | 1.753 |
| 161 | 7/22/81 | 10.493 | 2.709 | 12.361 | 2.456 | 14.579 | 2.162 | 16.299 | 2.465 |
| 111 | 7/23/81 | 7.419 | 1.733 | 8.550 | 1.014 | 10.204 | 1.259 | 9.297 | 1.357 |
| 121 | 7/23/81 | 5.505 | 0.949 | 9.273 | 1.361 | 12.642 | 1.321 | 17.269 | 1.594 |
| 131 | 7/23/81 | 4.282 | 1.729 | 8.679 | 1.519 | 10.085 | 1.993 | 9.749 | 1.723 |
| 152 | 7/23/81 | 7.604 | 1.384 | 9.538 | 0.802 | 9.990 | 1.072 | 10.645 | 1.343 |
| 161 | 7/23/81 | 4.657 | 2.567 | 10.331 | 2.391 | 12.924 | 1.879 | 15.204 | 1.908 |
| 221 | 7/27/81 | 15.993 | 1.675 | 19.357 | 1.947 | 21.771 | 1.730 | 22.432 | 1.627 |
| 261 | 7/27/81 | 18.117 | 2.652 | 19.855 | 1.678 | 21.225 | 1.374 | 21.485 | 1.844 |
| 221 | 7/30/81 | 11.386 | 3.092 | 17.710 | 2.819 | 21.628 | 2.608 | 20.065 | 5.833 |
| 223 | 7/30/81 | 10.499 | 1.072 | 16.181 | 0.531 | 20.759 | 0.278 | 24.293 | 0.538 |
| 231 | 7/30/81 | 20.342 | 2.471 | 21.858 | 1.901 | 22.498 | 1.123 | 21.754 | 1.453 |
| 261 | 7/30/81 | 15.704 | 1.805 | 19.928 | 0.522 | 21.500 | 1.235 | 22.221 | 0.916 |
| 221 | 7/31/81 | 6.818 | 2.208 | 15.231 | 4.947 | 21.017 | 1.853 | 22.747 | 1.866 |
| 223 | 7/31/81 | 10.337 | 3.240 | 15.287 | 2.404 | 19.820 | 1.987 | 23.493 | 1.533 |
| 231 | 7/31/81 | 12.354 | 4.490 | 18.561 | 2.079 | 20.991 | 1.381 | 20.467 | 1.346 |
| 261 | 7/31/81 | 9.288 | 2.149 | 16.892 | 2.095 | 19.983 | 1.362 | 20.758 | 1.251 |
| 111 | 8/ 4/81 | 13.737 | 0.696 | 13.517 | 0.930 | 14.465 | 0.733 | 12.586 | 0.928 |
| 121 | 8/ 4/81 | 13.869 | 1.895 | 13.483 | 2.104 | 15.068 | 2.233 | 18.782 | 2.886 |
| 131 | 8/ 4/81 | 12.240 | 1.915 | 12.394 | 2.075 | 11.071 | 2.388 | 9.946 | 2.390 |
| 152 | 8/ 4/81 | 16.270 | 3.227 | 15.406 | 3.314 | 13.391 | 5.196 | 11.129 | 3.609 |
| 161 | 8/ 4/81 | 15.025 | 3.158 | 15.458 | 3.274 | 16.133 | 3.653 | 17.259 | 3.485 |
| 111 | 8/ 5/81 | 7.738 | 1.431 | 9.956 | 0.760 | 12.267 | 0.825 | 12.249 | 0.855 |
| 121 | 8/ 5/81 | 7.670 | 2.115 | 10.517 | 1.477 | 13.199 | 1.555 | 17.579 | 1.906 |
| 131 | 8/ 5/81 | 7.594 | 1.342 | 9.261 | 1.384 | 11.118 | 0.581 | 11.114 | 0.519 |
| 152 | 8/ 5/81 | 10.089 | 1.147 | 11.980 | 0.868 | 11.747 | 1.451 | 11.723 | 2.469 |
| 161 | 8/ 5/81 | 7.891 | 2.841 | 12.385 | 2.832 | 14.400 | 3.609 | 16.088 | 3.602 |
| 221 | 8/10/81 | 5.778 | 3.018 | 13.128 | 2.030 | 18.825 | 1.255 | 21.430 | 1.028 |
| 223 | 8/10/81 | 7.121 | 2.143 | 14.056 | 0.561 | 18.902 | 0.619 | 21.893 | 0.449 |
| 231 | 8/10/81 | 10.287 | 2.385 | 18.131 | 8.025 | 17.261 | 1.661 | 17.324 | 1.605 |
| 261 | 8/10/81 | 9.198 | 3.723 | 15.782 | 1.460 | 17.687 | 1.094 | 18.572 | 0.656 |

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Table A. (Continued)

| Field | Date | Depth (cm) | | | | | | | |
|-------|---------|------------|---------|--------|---------|--------|---------|--------|---------|
| | | 0-2 | | 2-4 | | 4-10 | | 10-16 | |
| | | Mean | Std Dev | Mean | Std Dev | Mean | Std Dev | Mean | Std Dev |
| 221 | 8/11/81 | 5.129 | 2.272 | 9.820 | 3.793 | 14.171 | 4.015 | 18.390 | 4.542 |
| 223 | 8/11/81 | 7.950 | 2.238 | 13.867 | 0.728 | 26.025 | 13.402 | 21.217 | 0.853 |
| 231 | 8/11/81 | 9.526 | 1.530 | 13.929 | 1.225 | 15.879 | 1.055 | 16.178 | 1.081 |
| 261 | 8/11/81 | 11.167 | 1.086 | 15.533 | 1.356 | 17.228 | 2.211 | 18.684 | 1.682 |
| 221 | 8/13/81 | 24.890 | 3.445 | 24.411 | 3.801 | 24.710 | 2.754 | 26.938 | 5.651 |
| 223 | 8/13/81 | 22.614 | 1.124 | 19.712 | 3.289 | 22.734 | 1.016 | 24.503 | 2.223 |
| 231 | 8/13/81 | 29.670 | 6.751 | 26.590 | 2.497 | 25.110 | 2.398 | 29.385 | 12.805 |
| 261 | 8/13/81 | 23.097 | 2.188 | 18.384 | 9.079 | 22.095 | 1.078 | 21.496 | 1.762 |
| 221 | 8/14/81 | 11.817 | 4.399 | 17.506 | 3.886 | 20.182 | 2.210 | 21.818 | 1.342 |
| 223 | 8/14/81 | 17.106 | 2.066 | 17.545 | 1.232 | 21.057 | 1.088 | 24.091 | 0.857 |
| 231 | 8/14/81 | 19.981 | 2.284 | 22.424 | 1.891 | 22.482 | 1.337 | 20.590 | 1.673 |
| 261 | 8/14/81 | 15.847 | 4.068 | 18.494 | 2.488 | 19.181 | 2.885 | 18.413 | 3.936 |
| 221 | 8/17/81 | 16.230 | 1.488 | 19.495 | 1.632 | 21.728 | 1.825 | 22.567 | 1.606 |
| 223 | 8/17/81 | 11.870 | 1.460 | 15.574 | 0.515 | 19.767 | 0.843 | 23.170 | 1.785 |
| 231 | 8/17/81 | 16.049 | 2.158 | 18.947 | 1.671 | 19.390 | 2.245 | 18.605 | 2.050 |
| 261 | 8/17/81 | 16.138 | 2.070 | 18.313 | 1.096 | 18.740 | 0.814 | 18.722 | 0.692 |
| 221 | 8/18/81 | 10.109 | 3.562 | 14.981 | 4.971 | 19.313 | 3.249 | 22.242 | 2.352 |
| 223 | 8/18/81 | 10.548 | 1.247 | 14.813 | 0.684 | 18.724 | 0.637 | 21.627 | 1.088 |
| 231 | 8/18/81 | 14.113 | 2.888 | 18.336 | 2.119 | 19.749 | 2.016 | 19.181 | 2.506 |
| 261 | 8/18/81 | 12.110 | 1.789 | 16.757 | 1.728 | 18.646 | 1.995 | 19.699 | 2.061 |
| 221 | 8/19/81 | 11.174 | 2.175 | 16.976 | 1.296 | 20.447 | 1.562 | 22.300 | 1.553 |
| 223 | 8/19/81 | 9.859 | 1.984 | 13.918 | 0.711 | 18.394 | 0.458 | 21.535 | 0.577 |
| 231 | 8/19/81 | 9.143 | 0.822 | 13.948 | 1.040 | 15.584 | 0.976 | 16.083 | 1.245 |
| 261 | 8/19/81 | 9.869 | 3.365 | 15.193 | 2.053 | 17.019 | 1.191 | 18.507 | 0.988 |
| 221 | 8/20/81 | 9.262 | 2.190 | 16.248 | 2.385 | 20.288 | 2.066 | 22.015 | 1.471 |
| 223 | 8/20/81 | 8.567 | 1.402 | 14.558 | 0.880 | 18.341 | 0.747 | 20.843 | 1.036 |
| 231 | 8/20/81 | 5.599 | 2.862 | 13.739 | 2.673 | 15.429 | 1.365 | 16.157 | 1.084 |
| 261 | 8/20/81 | 8.583 | 1.886 | 14.969 | 1.942 | 16.580 | 1.518 | 17.733 | 1.857 |
| 111 | 8/26/81 | 2.011 | 0.610 | 3.955 | 1.039 | 7.508 | 0.834 | 9.250 | 1.010 |
| 121 | 8/26/81 | 5.025 | 1.556 | 9.417 | 1.036 | 12.041 | 1.078 | 16.555 | 1.674 |
| 152 | 8/26/82 | 2.108 | 0.341 | 2.852 | 1.988 | 5.600 | 0.897 | 6.326 | 1.122 |
| 111 | 8/27/81 | 1.381 | 0.489 | 2.644 | 0.876 | 6.000 | 0.973 | 7.470 | 1.373 |
| 121 | 8/27/81 | 3.985 | 1.161 | 8.711 | 1.044 | 11.320 | 1.068 | 15.950 | 1.386 |
| 152 | 8/27/81 | 1.745 | 0.580 | 3.905 | 0.854 | 5.051 | 1.722 | 6.649 | 1.058 |
| 111 | 9/11/81 | 5.344 | 1.307 | 7.533 | 0.901 | 9.661 | 1.598 | 9.294 | 0.692 |
| 121 | 9/11/81 | 6.400 | 1.209 | 8.356 | 0.969 | 12.547 | 1.259 | 14.626 | 1.771 |
| 131 | 9/11/81 | 4.479 | 0.937 | 7.861 | 1.232 | 8.595 | 1.684 | 9.272 | 1.655 |
| 152 | 9/11/81 | 4.844 | 1.049 | 7.753 | 1.121 | 8.944 | 1.515 | 9.648 | 1.545 |
| 161 | 9/11/81 | 8.573 | 2.154 | 11.129 | 2.946 | 11.964 | 2.771 | 13.742 | 3.562 |
| 121 | 9/29/81 | 6.637 | 1.046 | 9.557 | 1.158 | 13.662 | 1.421 | 16.164 | 1.558 |
| 131 | 9/29/81 | 7.675 | 2.707 | 11.036 | 1.217 | 12.965 | 1.368 | 14.226 | 1.768 |
| 161 | 9/29/81 | 9.022 | 2.692 | 11.290 | 1.924 | 11.645 | 1.946 | 13.904 | 1.991 |
| 111 | 9/30/81 | 12.969 | 1.556 | 14.291 | 1.114 | 15.607 | 1.237 | 16.559 | 1.179 |
| 121 | 9/30/81 | 6.773 | 1.546 | 8.501 | 1.084 | 13.170 | 1.651 | 15.006 | 1.639 |

Table A. (Continued)

| Field | Date | Depth (cm) | | | | | | | |
|-------|---------|------------|---------|--------|---------|--------|---------|--------|---------|
| | | 0-2 | | 2-4 | | 4-10 | | 10-16 | |
| | | Mean | Std Dev | Mean | Std Dev | Mean | Std Dev | Mean | Std Dev |
| 131 | 9/30/81 | 9.090 | 2.978 | 10.871 | 1.766 | 12.590 | 1.634 | 13.695 | 1.961 |
| 152 | 9/30/81 | 8.765 | 3.698 | 9.964 | 1.732 | 10.572 | 1.180 | 13.226 | 1.489 |
| 161 | 9/30/81 | 12.125 | 3.933 | 13.247 | 3.728 | 13.581 | 3.490 | 15.250 | 3.260 |

APPENDIX B
CLIMATIC DATA

Table B-1
Climatic Data (Edmonston)

| Date | Time | Rainfall (cm) | Evaporation (cm/day) | Air Temperature (C) | | | | Water Temperature (C) | | Average Wind (km/hr) | Relative Humidity (Percent) | Suction at Depth (cm) | | | |
|---------|------|------------------|-------------------------|---------------------|------|------|------|-----------------------------|------|----------------------------|-----------------------------------|-----------------------------|-----|-----|-----|
| | | | | Max | Min | Dry | Wet | Max | Min | | | 30" | 30" | 45" | 75" |
| 6/19/81 | 930 | 0.0 | 0.475 | 28.3 | 18.3 | 25.0 | 21.7 | 35.0 | 23.1 | 12.1 | 85 | - | - | - | - |
| 6/20/81 | - | 0.305 | 0.24 | 27.8 | 18.3 | - | - | - | - | - | - | - | - | - | - |
| 6/21/81 | - | 0.0 | 0.24 | 31.1 | 15.8 | - | - | - | - | - | - | - | - | - | - |
| 6/22/81 | 945 | 0.0 | 0.240 | 32.5 | 18.9 | 28.1 | 24.2 | 35.7 | 21.1 | 15.6 | 88 | - | - | - | - |
| 6/23/81 | 930 | 0.0 | 0.818 | 33.1 | 16.1 | 25.0 | 19.2 | 34.5 | 19.3 | 36.2 | 61 | - | - | - | - |
| 6/24/81 | 1100 | 0.0 | 0.724 | 28.3 | 16.7 | 29.2 | 23.1 | 33.1 | 19.7 | 20.9 | 60 | - | - | - | - |
| 6/25/81 | 930 | 0.737 | 0.709 | 30.0 | 23.1 | 28.3 | 24.7 | 32.5 | 22.8 | 43.9 | 90 | - | - | - | - |
| 6/26/81 | 930 | 0.0 | 0.0 | 33.6 | 17.8 | 20.0 | 14.2 | 35.6 | 20.6 | 31.2 | 50 | - | - | - | - |
| 6/27/81 | - | 0.0 | 0.745 | 24.4 | 8.9 | - | - | - | - | - | - | - | - | - | - |
| 6/28/81 | - | 0.0 | 0.745 | 27.8 | 8.9 | - | - | - | - | - | - | - | - | - | - |
| 6/29/81 | 930 | 0.0 | 0.745 | 29.4 | 9.3 | 25.0 | 18.3 | 33.7 | 16.8 | 21.2 | 60 | - | - | - | - |
| 6/30/81 | 930 | 0.0 | 0.655 | 30.0 | 17.2 | - | - | 33.3 | 19.7 | 11.5 | 58 | - | - | - | - |
| 7/01/81 | 930 | 2.235 | 0.732 | 28.9 | 20.0 | - | - | 32.8 | 20.3 | 62.1 | 99 | - | - | - | - |
| 7/02/81 | 930 | 0.0 | -1.791 | 26.7 | 18.3 | - | - | 27.3 | 20.6 | 25.3 | 100 | - | - | - | - |
| 7/03/81 | - | 0.127 | -0.353 | 25.6 | 19.7 | - | - | - | - | - | - | - | - | - | - |
| 7/04/81 | - | 1.905 | -0.353 | 25.0 | 18.1 | - | - | - | - | - | - | - | - | - | - |
| 7/05/81 | - | 0.127 | -0.353 | 26.4 | 16.4 | - | - | - | - | - | - | - | - | - | - |
| 7/06/81 | 930 | 0.0 | -0.353 | 30.0 | 20.0 | 3.9 | 22.5 | 31.1 | 21.7 | 12.7 | 99 | - | - | - | - |
| 7/07/81 | 930 | 0.0 | 0.500 | 30.6 | 18.9 | 27.2 | 23.9 | 34.5 | 23.2 | 4.9 | 80 | - | - | - | - |
| 7/08/81 | 930 | 0.0 | 0.358 | 32.2 | 18.9 | 28.3 | 24.2 | 36.7 | 23.3 | 14.6 | 70 | - | - | - | - |
| 7/09/81 | 930 | 0.0 | 0.724 | 33.4 | 23.6 | 29.4 | 26.7 | 37.3 | 24.8 | 13.8 | 77 | 7 | 18 | 13 | 11 |
| 7/10/81 | 930 | 0.0 | 0.795 | 34.7 | 22.8 | 28.1 | 25.6 | 38.3 | 26.1 | 14.4 | 77 | 8 | 18 | 13 | 11 |
| 7/11/81 | - | 0.0 | 0.752 | 31.1 | 16.1 | - | - | - | - | - | - | - | - | - | - |
| 7/12/81 | - | 0.0 | 0.752 | 32.2 | 15.6 | - | - | - | - | - | - | - | - | - | - |
| 7/13/81 | 930 | 0.0 | 0.752 | 31.1 | 21.1 | 28.9 | 22.8 | 36.1 | 21.4 | 13.2 | 62 | 10 | 20 | 14 | 14 |
| 7/14/81 | 930 | 0.0 | 0.706 | 31.4 | 18.9 | 27.2 | 24.2 | 33.1 | 23.3 | 15.3 | 76 | 11 | 20 | 14 | 14 |
| 7/15/81 | 930 | 0.0 | 0.767 | 31.7 | 11.7 | 21.7 | 17.8 | 33.1 | 18.3 | 23.3 | 63 | 11 | 20 | 14 | 14 |
| 7/16/81 | 930 | 0.0 | 0.945 | 28.3 | 14.4 | 25.0 | 21.1 | 32.2 | 18.9 | 14.1 | 67 | 12 | 21 | 15 | 16 |
| 7/17/81 | 930 | 0.0 | 0.251 | 26.7 | 15.0 | 23.9 | 21.1 | 25.3 | 20.0 | 5.1 | 84 | 13 | 22 | 15 | 16 |
| 7/18/81 | - | 0.0 | 0.830 | 32.2 | 14.4 | - | - | - | - | - | - | - | - | - | - |

B-1

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Table B-1 (Continued)

| Date | Time | Rainfall (cm) | Evaporation (cm/day) | Air Temperature (C) | | | | Water Temperature (C) | | Average Wind (km/hr) | Relative Humidity (Percent) | Suction at Depth (cm) | | | |
|---------|------|------------------|-------------------------|---------------------|------|------|------|-----------------------------|------|----------------------------|-----------------------------------|-----------------------------|-----------------|-----------------|-----------------|
| | | | | Max | Min | Dry | Wet | Max | Min | | | 30* | 30 ⁺ | 45 ⁺ | 75 ⁺ |
| 7/19/81 | - | 0.0 | 0.830 | 33.6 | 16.7 | - | - | - | - | - | - | - | - | - | - |
| 7/20/81 | 930 | 0.610 | 0.830 | 32.2 | 22.2 | 23.9 | 23.1 | 35.8 | 20.3 | 12.4 | 98 | 15 | 22 | 14 | 17 |
| 7/21/81 | 930 | 0.203 | -1.090 | 33.8 | 21.1 | 26.7 | 25.3 | 34.4 | 23.8 | 31.0 | 98 | 15 | 24 | 15 | 16 |
| 7/22/81 | 930 | 0.0 | 0.838 | 33.3 | 18.6 | 23.3 | 20.8 | 35.3 | 22.8 | 20.1 | 82 | 14 | 22 | 15 | 13 |
| 7/23/81 | 930 | 0.0 | 0.737 | 27.8 | 15.0 | 21.1 | 16.7 | 31.9 | 19.7 | 22.3 | 55 | 14 | 22 | 15 | 14 |
| 7/24/81 | 930 | 0.0 | 0.899 | 26.9 | 13.9 | 21.4 | 19.2 | 32.8 | 18.3 | 16.8 | 77 | 15 | 22 | 15 | 15 |
| 7/25/81 | - | 1.143 | -0.254 | 22.2 | 18.9 | - | - | - | - | - | - | - | - | - | - |
| 7/26/81 | - | 0.0 | -0.254 | 30.0 | 21.1 | - | - | - | - | - | - | - | - | - | - |
| 7/27/81 | 930 | 0.0 | -0.254 | 31.1 | 20.0 | 26.1 | 24.2 | 32.9 | 20.3 | 11.7 | 89 | 12 | 21 | 16 | 12 |
| 7/28/81 | 930 | 1.143 | 0.572 | 31.1 | 19.4 | 23.9 | 21.4 | 34.7 | 23.6 | 13.7 | 80 | 12 | 20 | 15 | 12 |
| 7/29/81 | 930 | 0.0 | -1.181 | 27.8 | 21.1 | 25.3 | 23.9 | 30.2 | 22.8 | 12.1 | 92 | 12 | 21 | 15 | 11 |
| 7/30/81 | 930 | 0.0 | 0.716 | 27.5 | 10.6 | 20.8 | 17.5 | 33.1 | 16.7 | 27.5 | 64 | 10 | 20 | 15 | 10 |
| 7/31/81 | 930 | 0.0 | 0.597 | 28.9 | 12.2 | 23.3 | 19.4 | 33.1 | 17.8 | 15.7 | 66 | 10 | 20 | 15 | 11 |
| 8/01/81 | - | 0.0 | 0.652 | 27.5 | 23.9 | - | - | - | - | - | - | - | - | - | - |
| 8/02/81 | - | 0.0 | 0.652 | 29.2 | 11.7 | - | - | - | - | - | - | - | - | - | - |
| 8/03/81 | 930 | 0.169 | 0.652 | 27.2 | 17.8 | 24.4 | 21.9 | 35.2 | 18.5 | 13.4 | 92 | 13 | 21 | 15 | 14 |
| 8/04/81 | 930 | 0.127 | 0.127 | 27.5 | 18.3 | 25.8 | 23.6 | 28.8 | 22.3 | 5.3 | 99 | 12 | 22 | 15 | 15 |
| 8/05/81 | 930 | 0.0 | 0.394 | 31.1 | 18.9 | 28.9 | 25.3 | 33.4 | 23.4 | 10.4 | 80 | 14 | 22 | 16 | 15 |
| 8/06/81 | 930 | 0.254 | 0.559 | 32.2 | 17.5 | 20.6 | 20.6 | 33.4 | 21.1 | 25.6 | 100 | 12 | 22 | 14 | 13 |
| 8/07/81 | 930 | 0.0 | -0.348 | 21.2 | 13.9 | 19.2 | 19.2 | 22.9 | 18.1 | 5.1 | 100 | 13 | 22 | 15 | 14 |
| 8/08/81 | - | 0.0 | 0.169 | 29.4 | 25.0 | - | - | - | - | - | - | - | - | - | - |
| 8/09/81 | - | 0.0 | 0.169 | 31.7 | 17.8 | - | - | - | - | - | - | - | - | - | - |
| 8/10/81 | 930 | 0.0 | 0.169 | 32.2 | 17.3 | 26.4 | 22.5 | 35.3 | 19.3 | 8.6 | 74 | 12 | 21 | 16 | 14 |
| 8/11/81 | 930 | 0.254 | 0.655 | 32.4 | 18.9 | 25.3 | 23.6 | 36.0 | 23.5 | 9.5 | 99 | 13 | 21 | 15 | 14 |
| 8/12/81 | 930 | 2.286 | -0.696 | 33.6 | 19.1 | 19.2 | 19.2 | 34.6 | 21.4 | 23.5 | 100 | 12 | 21 | 14 | 13 |
| 8/13/81 | 930 | 0.0 | -0.696 | 28.3 | 14.4 | 22.8 | 20.0 | 28.3 | 19.4 | 7.4 | 82 | 12 | 22 | 16 | 12 |
| 8/14/81 | 930 | 0.0 | 0.414 | 28.9 | 16.3 | 23.9 | 21.3 | 31.9 | 20.6 | 10.7 | 86 | 11 | 20 | 15 | 11 |
| 8/15/81 | - | 0.864 | 0.216 | 29.7 | 16.7 | - | - | - | - | - | - | - | - | - | - |
| 8/16/81 | - | 0.0 | 0.216 | 29.2 | 18.9 | - | - | - | - | - | - | - | - | - | - |
| 8/17/81 | 930 | 0.0 | 0.216 | 23.9 | 10.5 | 18.3 | 14.7 | 33.4 | 17.4 | 21.5 | 60 | 12 | 21 | 15 | 12 |
| 8/18/81 | 930 | 0.0 | 0.582 | 24.4 | 6.7 | 19.2 | 15.6 | 28.5 | 14.2 | 24.1 | 53 | 13 | 21 | 15 | 13 |
| 8/19/81 | 930 | 0.0 | 0.523 | 26.0 | 6.7 | 19.4 | 18.1 | 29.2 | 16.2 | 13.5 | 94 | 13 | 22 | 15 | 14 |

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Table B-1 (Continued)

| Date | Time | Rainfall (cm) | Evaporation (cm/day) | Air Temperature (C) | | | | Water Temperature (c) | | Average Wind (km/hr) | Relative Humidity (Percent) | Suction at Depth (cm) | | | |
|---------|------|------------------|-------------------------|---------------------|------|------|------|-----------------------------|------|----------------------------|-----------------------------------|-----------------------------|-----------------|-----------------|-----------------|
| | | | | Max | Min | Dry | Wet | Max | Min | | | 30* | 30 ⁺ | 45 ⁺ | 75 ⁺ |
| 8/20/81 | 930 | 0.0 | 0.483 | 24.7 | 14.8 | 21.1 | 18.7 | 26.6 | 16.2 | 44.0 | 70 | 16 | 22 | 16 | 16 |
| 8/21/81 | 930 | 0.0 | 0.770 | 25.6 | 8.3 | 20.0 | 16.1 | 28.4 | 14.4 | 41.2 | 62 | 16 | 22 | 16 | 17 |
| 8/22/81 | — | 0.0 | 0.466 | 20.0 | 13.3 | — | — | — | — | — | — | — | — | — | — |
| 8/23/81 | — | 0.0 | 0.466 | 27.2 | 8.9 | — | — | — | — | — | — | — | — | — | — |
| 8/24/81 | 930 | 0.0 | 0.466 | 30.3 | 11.1 | 23.2 | 19.4 | 31.1 | 14.4 | 17.8 | 67 | 19 | 25 | 16 | 22 |
| 8/25/81 | 930 | 0.0 | 0.503 | 30.8 | 13.9 | 20.8 | 18.3 | 31.1 | 18.3 | 23.4 | 72 | 20 | 24 | 16 | 22 |
| 8/26/81 | 930 | 0.0 | 0.467 | 26.7 | 11.9 | 21.1 | 19.2 | 29.0 | 22.8 | 21.2 | 97 | 21 | 25 | 16 | 23 |
| 8/27/81 | 930 | 0.0 | 0.493 | 26.7 | 15.3 | 21.4 | 18.3 | 30.3 | 18.3 | 18.7 | 80 | 22 | 26 | 17 | 24 |
| 8/28/81 | 930 | 0.0 | 0.495 | 29.5 | 14.6 | 22.5 | 20.3 | 31.9 | 20.6 | 19.9 | 92 | 23 | 26 | 17 | 25 |
| 8/29/81 | — | 0.0 | -0.615 | 27.8 | 13.3 | — | — | — | — | — | — | — | — | — | — |
| 8/30/81 | — | 0.940 | -0.615 | 26.1 | 18.9 | — | — | — | — | — | — | — | — | — | — |
| 8/31/81 | 930 | 1.727 | -0.615 | 26.1 | 18.9 | 20.9 | 20.6 | 32.5 | 19.0 | 15.1 | 99 | 18 | 27 | 16 | 20 |
| 9/01/81 | 930 | 0.0 | 0.185 | 26.8 | 18.7 | 22.2 | 21.6 | 29.0 | 21.3 | 11.4 | 99 | 12 | 24 | 17 | 13 |
| 9/02/81 | 930 | 0.0 | 0.312 | 27.8 | 18.9 | 22.0 | 21.8 | 31.2 | 22.1 | 10.0 | 100 | 11 | 22 | 17 | 12 |
| 9/03/81 | 930 | 0.0 | 0.335 | 27.0 | 17.9 | 2.16 | 20.7 | 28.9 | 21.6 | 16.5 | 100 | 11 | 21 | 16 | 12 |
| 9/04/81 | 930 | 0.0 | 0.335 | 26.1 | 17.9 | 20.6 | 19.7 | 28.7 | 20.0 | 19.5 | 100 | 12 | 20 | 16 | 12 |
| 9/05/81 | — | 0.0 | 0.184 | 22.8 | 15.8 | — | — | — | — | — | — | — | — | — | — |
| 9/06/81 | — | 0.0 | 0.184 | 26.7 | 15.8 | — | — | — | — | — | — | — | — | — | — |
| 9/07/81 | — | 0.0 | 0.184 | 25.0 | 15.8 | — | — | — | — | — | — | — | — | — | — |
| 9/08/81 | — | 0.0 | 0.184 | — | — | — | — | — | — | — | — | — | — | — | — |
| 9/09/81 | 1050 | 0.0 | 0.184 | 27.3 | 9.4 | 21.0 | 16.6 | 28.5 | 14.8 | 64.4 | 64 | 18 | 23 | 17 | 18 |
| 9/10/81 | 1000 | 0.0 | 0.465 | 24.6 | 6.5 | 19.1 | 15.4 | 26.9 | 13.3 | 13.0 | 68 | 18 | 24 | 17 | 19 |
| 9/11/81 | 1020 | 0.0 | 0.503 | 26.0 | 11.2 | 24.7 | 16.9 | 27.6 | 16.0 | 20.7 | 44 | 18 | 24 | 18 | 20 |
| 9/12/81 | — | 0.0 | 0.452 | — | — | — | — | — | — | — | — | — | — | — | — |
| 9/13/81 | — | 0.0 | 0.452 | — | — | — | — | — | — | — | — | — | — | — | — |
| 9/14/81 | 950 | 0.0 | 0.452 | 31.2 | 14.1 | 25.8 | 22.4 | 32.9 | 19.2 | 39.8 | 75 | 22 | 26 | 18 | 25 |
| 9/15/81 | 950 | 4.953 | 0.457 | 32.6 | 18.2 | 21.8 | 20.7 | 33.7 | 21.7 | 11.6 | 99 | 22 | 27 | 17 | 24 |
| 9/16/81 | 1000 | 1.651 | -3.023 | 26.6 | 15.3 | 15.9 | 15.5 | 27.4 | 16.8 | 35.7 | 100 | 6 | 24 | 16 | 7 |
| 9/17/81 | 955 | 0.127 | 0.097 | 19.6 | 15.6 | 18.2 | 17.1 | 21.3 | 17.9 | 12.3 | 100 | 6 | 18 | 16 | 7 |
| 9/18/81 | 1000 | 0.635 | -0.551 | 22.3 | 13.3 | 15.2 | 13.2 | 24.1 | 16.6 | 12.3 | 86 | 4 | 17 | 14 | 6 |
| 9/19/81 | — | 0.127 | -0.003 | 17.8 | 9.7 | — | — | — | — | — | — | — | — | — | — |
| 9/20/81 | — | 0.0 | -0.003 | 16.7 | 9.7 | — | — | — | — | — | — | — | — | — | — |

B-3

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Table B-1 (Continued)

| Date | Time | Rainfall (cm) | Evaporation (cm/day) | Air Temperature (C) | | | | Water Temperature (c) | | Average Wind (km/hr) | Relative Humidity (Percent) | Suction at Depth (cm) | | | |
|---------|------|------------------|-------------------------|---------------------|------|------|------|-----------------------------|------|----------------------------|-----------------------------------|-----------------------------|-----------------|-----------------|-----------------|
| | | | | Max | Min | Dry | Wet | Max | Min | | | 30* | 30 ⁺ | 45 ⁺ | 75 ⁺ |
| 9/21/81 | 1005 | 0.0 | -0.003 | 23.9 | 12.5 | 19.4 | 15.2 | 21.3 | 11.8 | 44.3 | 61 | 8 | 17 | 14 | 10 |
| 9/22/81 | 1035 | 0.381 | 0.325 | 24.7 | 10.2 | 21.8 | 18.4 | 27.4 | 15.2 | 11.1 | 75 | 9 | 18 | 14 | 11 |
| 9/23/81 | 1000 | 0.0 | -0.111 | 27.6 | 9.2 | 13.4 | 9.6 | 28.5 | 13.6 | 25.1 | 57 | 7 | 18 | 12 | 10 |
| 9/24/81 | 1030 | 0.0 | 0.493 | 17.8 | 7.6 | 16.0 | 11.1 | 21.9 | 9.2 | 38.1 | 55 | 9 | 18 | 14 | 10 |
| 9/25/81 | 1030 | 0.0 | 0.414 | 20.3 | 4.0 | 19.1 | 13.2 | 22.3 | 9.3 | 23.0 | 50 | 10 | 18 | 14 | 12 |
| 9/26/81 | - | 0.0 | 0.362 | 25.0 | 8.1 | - | - | - | - | - | - | - | - | - | - |
| 9/27/81 | - | 0.0 | 0.362 | 26.7 | 10.6 | - | - | - | - | - | - | - | - | - | - |
| 9/28/81 | 1000 | 0.0 | 1.087 | 27.6 | 8.6 | 18.4 | 11.8 | 28.1 | 14.3 | 46.3 | 41 | 10 | 19 | 14 | 12 |
| 9/29/81 | 950 | 0.0 | 0.528 | 20.4 | 2.4 | 15.2 | 10.7 | 24.8 | 9.6 | 21.7 | 57 | 10 | 20 | 14 | 13 |
| 9/30/81 | 1000 | 0.0 | 0.274 | 20.3 | 11.8 | 15.1 | 9.9 | 22.2 | 12.9 | 11.1 | 49 | 9 | 20 | 13 | 13 |
| 10/1/81 | 940 | 0.0 | 0.218 | 21.2 | 10.0 | 17.9 | 16.1 | 22.1 | 14.9 | 6.9 | 82 | 10 | 20 | 14 | 14 |
| 10/2/81 | 1000 | 0.584 | -0.290 | 28.4 | 9.0 | 11.3 | 10.4 | 25.6 | 15.0 | 31.4 | 90 | - | - | - | - |

*In row

⁺Between rows

B-4

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Table B-2
Climatic Data (South Farm)

| Date | Time | Rainfall (cm) | Air Temperature (C) | | Relative Humidity (Percent) |
|---------|------|------------------|---------------------|-------|-----------------------------------|
| | | | Max | Min | |
| 6/19/81 | 930 | 0.479 | 28.33 | 18.33 | 86 |
| 6/20/81 | 930 | 0.202 | 28.33 | 20.55 | 94 |
| 6/21/81 | 930 | — | 28.33 | 17.22 | 74 |
| 6/22/81 | 930 | — | 31.66 | 19.44 | 84 |
| 6/23/81 | 930 | — | 33.88 | 17.22 | 54 |
| 6/24/81 | 930 | — | 28.33 | 17.22 | 70 |
| 6/25/81 | 930 | 1.058 | 30.55 | 22.77 | 86 |
| 6/26/81 | 930 | — | 33.00 | 18.33 | 49 |
| 6/27/81 | 930 | — | 23.33 | 11.66 | 50 |
| 6/28/81 | 930 | — | 26.11 | 10.55 | 40 |
| 6/29/81 | 930 | — | 28.33 | 11.66 | 52 |
| 6/30/81 | 930 | — | 30.55 | 17.77 | 54 |
| 7/01/81 | 930 | 2.822 | 29.44 | 20.00 | 98 |
| 7/02/81 | 930 | 0.630 | 27.77 | 18.33 | 98 |
| 7/03/81 | 930 | 1.386 | 27.22 | 20.00 | 98 |
| 7/04/81 | 930 | 1.638 | 26.11 | 19.44 | 88 |
| 7/05/81 | 930 | — | 26.11 | 17.22 | 98 |
| 7/06/81 | 930 | — | 26.66 | 20.55 | 94 |
| 7/07/81 | 930 | — | 30.55 | 19.44 | 79 |
| 7/08/81 | 930 | — | 31.66 | 20.55 | 68 |
| 7/09/81 | 930 | — | 32.77 | 25.00 | 77 |
| 7/10/81 | 930 | — | 35.00 | 22.77 | 70 |
| 7/11/81 | 930 | — | 32.77 | 17.22 | 53 |
| 7/12/81 | 930 | — | 31.66 | 16.66 | 64 |
| 7/13/81 | 930 | — | 32.77 | 21.66 | 64 |
| 7/14/81 | 930 | — | 31.66 | 21.66 | 62 |
| 7/15/81 | 930 | — | 31.66 | 12.77 | 55 |
| 7/16/81 | 930 | — | 28.88 | 15.00 | 54 |
| 7/17/81 | 930 | — | 26.11 | 16.11 | 73 |
| 7/18/81 | 930 | — | 30.55 | 15.55 | 64 |
| 7/19/81 | 930 | — | 32.77 | 17.22 | 64 |
| 7/20/81 | 930 | 1.890 | 34.44 | 23.88 | 90 |
| 7/21/81 | 930 | — | 33.88 | 20.55 | 78 |
| 7/22/81 | 930 | — | 32.77 | 20.55 | 79 |
| 7/23/81 | 930 | — | 29.44 | 15.55 | 50 |
| 7/24/81 | 930 | 0.882 | 27.77 | 15.00 | 64 |
| 7/25/81 | 930 | 0.378 | 30.55 | 19.44 | 98 |
| 7/26/81 | 930 | — | 25.00 | 19.44 | 97 |
| 7/27/81 | 930 | — | 30.55 | 21.66 | 88 |
| 7/28/81 | 930 | 1.260 | 30.55 | 20.55 | 70 |
| 7/29/81 | 930 | — | 28.33 | 21.66 | 82 |
| 7/30/81 | 930 | — | 29.44 | 11.66 | 64 |
| 7/31/81 | 930 | — | 28.33 | 13.33 | 60 |

Table B-2 (Continued)

| Date | Time | Rainfall (cm) | Air Temperature (C) | | Relative Humidity (Percent) |
|---------|------|------------------|---------------------|-------|-----------------------------------|
| | | | Max | Min | |
| 8/01/81 | 930 | — | 30.55 | 15.00 | 77 |
| 8/02/81 | 930 | — | 28.33 | 13.33 | 83 |
| 8/03/81 | 930 | 0.630 | 29.44 | 20.00 | 88 |
| 8/04/81 | 930 | — | 28.88 | 17.77 | 90 |
| 8/05/81 | 930 | — | 31.66 | 18.33 | 70 |
| 8/06/81 | 930 | 0.504 | 32.22 | 17.77 | 98 |
| 8/07/81 | 930 | 0.176 | 22.22 | 14.44 | 98 |
| 8/08/81 | 930 | — | 29.44 | 21.66 | 98 |
| 8/09/81 | 930 | — | 26.11 | 18.33 | 66 |
| 8/10/81 | 930 | — | 31.66 | 18.33 | 68 |
| 8/11/81 | 930 | 1.512 | 32.77 | 20.55 | 80 |
| 8/12/81 | 930 | 0.630 | 33.88 | 32.77 | 98 |
| 8/13/81 | 930 | — | 28.33 | 16.11 | 74 |
| 8/14/81 | 930 | — | 28.33 | 17.22 | 71 |
| 8/15/81 | 930 | 1.058 | 30.55 | 18.33 | 80 |
| 8/16/81 | 930 | — | 30.55 | 20.55 | 90 |
| 8/17/81 | 930 | — | 29.44 | 11.66 | 56 |
| 8/18/81 | 930 | — | 25.00 | 8.33 | 48 |
| 8/19/81 | 930 | — | 28.33 | 11.66 | 88 |
| 8/20/81 | 930 | — | 30.55 | 15.00 | 70 |
| 8/21/81 | 930 | — | 26.11 | 10.55 | 58 |
| 8/22/81 | 930 | — | 25.55 | 14.44 | 88 |
| 8/23/81 | 930 | — | 21.11 | 11.11 | 76 |
| 8/24/81 | 930 | — | 29.44 | 12.22 | 62 |
| 8/25/81 | 930 | — | 30.55 | 13.88 | 70 |
| 8/26/81 | 930 | — | 26.66 | 12.77 | 88 |
| 8/27/81 | 930 | — | 26.11 | 15.55 | 78 |
| 8/28/81 | 930 | — | 29.44 | 15.55 | 80 |
| 8/29/81 | 930 | 0.252 | 32.77 | 15.00 | 84 |
| 8/30/81 | 930 | 3.024 | 28.33 | 20.55 | 92 |
| 8/31/81 | 930 | — | 26.11 | 20.00 | 99 |
| 9/01/81 | 930 | — | 26.66 | 19.44 | 98 |
| 9/02/81 | 930 | — | 27.22 | 19.44 | 98 |
| 9/03/81 | 930 | — | 26.66 | 18.88 | 97 |
| 9/04/81 | 930 | — | 25.00 | 18.33 | 98 |
| 9/05/81 | 930 | — | 21.66 | 18.33 | 97 |
| 9/06/81 | 930 | — | 22.77 | 16.11 | 97 |
| 9/07/81 | 930 | — | 26.11 | 17.77 | 90 |
| 9/08/81 | 930 | 0.126 | 25.00 | 16.11 | 98 |
| 9/09/81 | 930 | — | 23.88 | 10.55 | 80 |
| 9/10/81 | 930 | — | 24.44 | 7.22 | 80 |
| 9/11/81 | 930 | — | 26.11 | 11.11 | 60 |
| 9/12/81 | 930 | — | 29.44 | 15.00 | 68 |
| 9/13/81 | 930 | — | 30.55 | 16.11 | 68 |
| 9/14/81 | 930 | — | 30.55 | 15.00 | 80 |

Table B-2 (Continued)

| Date | Time | Rainfall (cm) | Air Temperature (C) | | Relative Humidity (Percent) |
|---------|------|------------------|---------------------|-------|-----------------------------------|
| | | | Max | Min | |
| 9/15/81 | 930 | 5.746 | 32.22 | 18.33 | 96 |
| 9/16/81 | 930 | — | 26.66 | 15.00 | 98 |
| 9/17/81 | 930 | 0.630 | 20.00 | 16.11 | 98 |
| 9/18/81 | 930 | 0.378 | 22.77 | 12.77 | 86 |
| 9/19/81 | 930 | — | 17.77 | 10.55 | 66 |
| 9/20/81 | 930 | — | 18.33 | 9.44 | 72 |
| 9/21/81 | 930 | — | 17.22 | 14.44 | 62 |
| 9/22/81 | 930 | 0.630 | 24.44 | 10.55 | 98 |
| 9/23/81 | 930 | — | 27.22 | 8.88 | 66 |
| 9/24/81 | 930 | — | 17.22 | 7.22 | 62 |
| 9/25/81 | 930 | — | 19.44 | 5.00 | 58 |
| 9/26/81 | 930 | — | 23.88 | 9.44 | 60 |
| 9/27/81 | 930 | — | 25.00 | 12.22 | 68 |
| 9/28/81 | 930 | — | 27.22 | 15.00 | 37 |
| 9/29/81 | 930 | — | 20.55 | 2.77 | 60 |
| 9/30/81 | 930 | — | 19.44 | 11.66 | 60 |
| 10/1/81 | 930 | 0.504 | 20.55 | 10.00 | 93 |
| 10/2/81 | 930 | — | 28.33 | 8.83 | 96 |

APPENDIX C
AGRONOMIC DATA

Table C1
Biomass data for corn (plots #131 and #231)

| Date | Height cm | Wet Biomass gm/m ² | Dry Biomass gm/m ² | Water Content gm/m ² |
|---------|--------------|----------------------------------|----------------------------------|------------------------------------|
| 6/25/81 | 28.4 | 41.3±9.5 | 6.2±1.3 | 35.1 |
| 7/20/81 | 144.4 | 2560±694 | 349±63 | 2211 |
| 7/30/81 | 242.7 | 3656±636 | 560±97 | 3096 |
| 8/ 5/81 | 230.9 | 3321±1455 | 552±271 | 2769 |
| 8/11/81 | 254.8 | 4276±612 | 781±141 | 3495 |
| 8/18/81 | 252.1 | 5100±1219 | 1054±258 | 4046 |
| 8/27/81 | 228.7 | 3811±1326 | 1256±471 | 2555 |
| 9/ 1/81 | 231.6 | 3733±1262 | 1216±441 | 2517 |
| 9/10/81 | 228.5 | 3094±950 | 1405±349 | 1689 |
| 9/21/81 | 234.3 | 2357±545 | 1324±147 | 1033 |

Table C2
Biomass data for soybean* (plots #161 and #261)

| Date | Wet Biomass gm/m ² | Dry Biomass gm/m ² | Water Content gm/m ² |
|---------|----------------------------------|----------------------------------|------------------------------------|
| 6/25/81 | 10.1±3.1 | 2.4±0.5 | 7.7 |
| 7/10/81 | 245±95 | 56±26 | 189 |
| 8/ 5/81 | 9.4±2.7 | 1.5±0.4 | 8 |
| 8/11/81 | 13.6±3.9 | 2.6±0.4 | 11 |
| 8/18/81 | 13±10 | 6.5±2.6 | 24 |
| 8/27/81 | 85±30 | 19.4±7.0 | 66 |
| 9/ 1/81 | 280±112 | 53±18 | 227 |
| 9/10/81 | 484±185 | 98±39 | 386 |
| 9/21/81 | 711±220 | 124±45 | 587 |

The plots were replanted on 7/29/81.

Table C3
Biomass data for alfalfa* (plot #111)

| Date | Wet Biomass gm/m ² | Dry Biomass gm/m ² | Water Content gm/m ² |
|---------|----------------------------------|----------------------------------|------------------------------------|
| 7/27/81 | 1606±435 | 244 | 1362 |
| 8/27/81 | 510±189 | 136 | 374 |
| 9/ 3/81 | 1032±286 | 172 | 860 |
| 9/10/81 | 774±122 | 146 | 628 |
| 9/21/81 | 1320±261 | 231 | 1089 |
| 10/1/81 | 1252±330 | 376 | 876 |

Alfalfa was clipped on 7/30/81

Table C4
Biomass data for orchardgrass† (plot #152)

| Date | Wet Biomass gm/m ² | Dry Biomass gm/m ² | Water Content gm/m ² |
|---------|----------------------------------|----------------------------------|------------------------------------|
| 7/27/81 | 1465±202 | 339 | 1126 |
| 8/27/81 | 891±195 | 397 | 494 |
| 9/ 3/81 | 1167±235 | 367 | 800 |
| 9/10/81 | 940±231 | 264 | 676 |
| 9/21/81 | 1349±260 | 352 | 997 |
| 10/1/81 | 1326±235 | 298 | 1028 |

† Orchardgrass was clipped on 7/30/81

APPENDIX D
RADIOMETRIC DATA FROM TEST SITE NO. 1

Date: 6/24/81

Time: 1344-1408

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 295.96 | 0.60 | 296.15 | 1.24 |
| X | 20 | 296.12 | 0.67 | 293.84 | 0.45 |
| X | 30 | 296.70 | 0.90 | 290.88 | 0.91 |
| X | 40 | 297.40 | 0.68 | 285.82 | — |
| X | 50 | 297.43 | 1.15 | 277.45 | — |
| X | 60 | 295.06 | 1.07 | 260.94 | — |
| X | 70 | 281.54 | 1.19 | 232.27 | — |
| C | 10 | 290.25 | 0.20 | 293.92 | — |
| C | 20 | 291.61 | — | 292.33 | — |
| C | 30 | 294.36 | — | 289.85 | 1.04 |
| C | 40 | 297.63 | 0.85 | 285.35 | — |
| C | 50 | 299.76 | — | 277.53 | — |
| C | 60 | 298.02 | — | 262.85 | — |
| C | 70 | 282.91 | 1.33 | 238.36 | 0.99 |
| L | 10 | 283.40 | 1.44 | 283.39 | 1.38 |
| L | 20 | 283.06 | 1.54 | 279.00 | 1.39 |
| L | 30 | 280.28 | 1.89 | 273.71 | 1.03 |
| L | 40 | 278.06 | 1.83 | 265.54 | 1.19 |
| L | 50 | 275.69 | 1.28 | 253.38 | 1.02 |
| L | 60 | 266.57 | 1.64 | 228.39 | 1.24 |
| L | 70 | 247.66 | 1.43 | 193.45 | 1.14 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 0.70 | 5.41 | 10.18 | 10.48 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 31.3 | 46.3 | 36.9 | 34.4 | 34.8 | 31.0 |

Date: 7/13/81

Time: 1323-1348

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 289.83 | 1.09 | 292.06 | 0.77 |
| X | 20 | 290.60 | 0.74 | 289.32 | 0.83 |
| X | 30 | 292.64 | — | 284.84 | — |
| X | 40 | 294.70 | 0.91 | 277.41 | — |
| X | 50 | 296.74 | 0.88 | 266.97 | 0.84 |
| X | 60 | 295.60 | 1.04 | 249.00 | 0.62 |
| X | 70 | 284.92 | — | 220.49 | 0.81 |
| C | 10 | 288.03 | 0.40 | 289.13 | 0.92 |
| C | 20 | 289.42 | — | 286.52 | 0.69 |
| C | 30 | 292.53 | — | 281.99 | — |
| C | 40 | 296.32 | 0.60 | 275.06 | — |
| C | 50 | 299.43 | — | 264.20 | 0.91 |
| C | 60 | 298.47 | 0.77 | 246.13 | — |
| C | 70 | 284.94 | 0.21 | 220.55 | 0.78 |
| L | 10 | 279.66 | 1.51 | 276.47 | 1.26 |
| L | 20 | 278.70 | 1.92 | 271.76 | 1.36 |
| L | 30 | 277.93 | 1.73 | 264.81 | 1.57 |
| L | 40 | 276.46 | 1.76 | 256.38 | 0.94 |
| L | 50 | 274.50 | 1.78 | 243.81 | 1.54 |
| L | 60 | 267.88 | 2.07 | 220.33 | 1.23 |
| L | 70 | 249.32 | 1.26 | 186.97 | 1.13 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 2.25 | 5.49 | 7.74 | 9.29 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 32.3 | 41.0 | 35.5 | 35.8 | 35.7 | 33.4 |



Date: 7/14/81

Time: 1243-1307

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 292.68 | — | 292.34 | — |
| X | 20 | 293.00 | 0.48 | 288.41 | — |
| X | 30 | 294.97 | 0.52 | 283.78 | — |
| X | 40 | 298.37 | 0.24 | 276.63 | — |
| X | 50 | 300.76 | 1.02 | 265.20 | 0.85 |
| X | 60 | 300.11 | 1.00 | 243.15 | 0.70 |
| X | 70 | 289.45 | 0.41 | 211.46 | 0.49 |
| C | 10 | 287.97 | — | 288.60 | 0.40 |
| C | 20 | 289.80 | 0.55 | 286.38 | 0.71 |
| C | 30 | 292.77 | — | 282.35 | 0.79 |
| C | 40 | 296.72 | — | 276.82 | — |
| C | 50 | 299.35 | 0.86 | 265.65 | 0.49 |
| C | 60 | 297.94 | — | 247.70 | — |
| C | 70 | 283.24 | — | 221.05 | — |
| L | 10 | 282.09 | 1.05 | 280.75 | 1.52 |
| L | 20 | 280.98 | 1.60 | 274.47 | 1.17 |
| L | 30 | 279.89 | 1.89 | 267.12 | 1.21 |
| L | 40 | 277.83 | 1.95 | 258.34 | 1.31 |
| L | 50 | 276.10 | 1.39 | 245.60 | 0.95 |
| L | 60 | 267.88 | 1.49 | 220.59 | 1.18 |
| L | 70 | 248.16 | 1.56 | 184.97 | 1.01 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 0.95 | 4.47 | 7.12 | 9.72 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 31.2 | 41.7 | 36.4 | 36.2 | 34.6 | 31.5 |

Date: 7/21/81

Time: 1330-1357

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 231.81 | 0.99 | 225.83 | 0.80 |
| X | 20 | 236.97 | — | 222.50 | — |
| X | 30 | 239.69 | 0.36 | 211.14 | — |
| X | 40 | 248.93 | 0.31 | 201.00 | 0.70 |
| X | 50 | 261.27 | 1.09 | 187.59 | — |
| X | 60 | 274.77 | — | 166.01 | 0.47 |
| X | 70 | 281.16 | — | 137.66 | 0.69 |
| C | 10 | 236.69 | 0.52 | 237.51 | 0.44 |
| C | 20 | 238.88 | 0.74 | 232.20 | 0.47 |
| C | 30 | 244.47 | 0.72 | 222.45 | — |
| C | 40 | 254.12 | 0.58 | 210.42 | — |
| C | 50 | 265.73 | — | 193.43 | 0.28 |
| C | 60 | 279.04 | 0.91 | 171.28 | 0.19 |
| C | 70 | 281.18 | — | 144.62 | 0.58 |
| L | 10 | 249.35 | 1.80 | 237.34 | 0.93 |
| L | 20 | 250.63 | 1.18 | 232.99 | 1.29 |
| L | 30 | 249.65 | 1.77 | 223.31 | 1.00 |
| L | 40 | 251.80 | 1.54 | 212.74 | 0.98 |
| L | 50 | 254.58 | 1.98 | 197.57 | 1.43 |
| L | 60 | 255.05 | 0.97 | 173.53 | 1.55 |
| L | 70 | 245.67 | 1.55 | 139.45 | 1.62 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 10.27 | 9.54 | 11.76 | 10.20 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 32.1 | 41.8 | 36.5 | 34.4 | 32.0 | 29.4 |

Date: 7/22/81

Time: 1316-1337

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 291.03 | — | 291.31 | — |
| X | 20 | 291.92 | 0.80 | 288.90 | 0.70 |
| X | 30 | 293.46 | 0.49 | 284.94 | 0.77 |
| X | 40 | 294.66 | — | 279.05 | 0.91 |
| X | 50 | 297.45 | 0.79 | 266.25 | 0.41 |
| X | 60 | 295.29 | 1.04 | 257.39 | 0.45 |
| X | 70 | 286.10 | — | 226.64 | 0.82 |
| C | 10 | 282.42 | — | 284.55 | 0.57 |
| C | 20 | 284.16 | — | 282.47 | 0.38 |
| C | 30 | 287.01 | 0.37 | 277.73 | 0.39 |
| C | 40 | 291.92 | 0.71 | 273.19 | 0.76 |
| C | 50 | 297.48 | — | 265.68 | — |
| C | 60 | 295.50 | — | 246.72 | 0.34 |
| C | 70 | 278.89 | — | 216.89 | 0.23 |
| L | 10 | 276.40 | 1.72 | 271.11 | 1.68 |
| L | 20 | 273.59 | 2.04 | 265.86 | 1.36 |
| L | 30 | 274.21 | 2.16 | 258.30 | 1.61 |
| L | 40 | 273.28 | 1.66 | 249.43 | 1.35 |
| L | 50 | 272.66 | 1.66 | 235.50 | 1.09 |
| L | 60 | 266.96 | 1.87 | 211.63 | 1.12 |
| L | 70 | 248.93 | 1.48 | 175.89 | 1.11 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 2.50 | 3.58 | 8.18 | 9.31 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.3 | 43.0 | 33.3 | 34.3 | 31.8 | 28.3 |

Date: 7/23/81

Time: 0736-0803

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 265.71 | — | 263.19 | 0.41 |
| X | 20 | 266.89 | 0.47 | 260.38 | 0.89 |
| X | 30 | 268.04 | — | 253.63 | 0.53 |
| X | 40 | 271.40 | 0.84 | 246.33 | — |
| X | 50 | 275.03 | — | 234.68 | 0.98 |
| X | 60 | 276.05 | 0.92 | 219.13 | 0.36 |
| X | 70 | 269.02 | 1.12 | 197.44 | — |
| C | 10 | 262.81 | 0.55 | 263.86 | — |
| C | 20 | 264.41 | — | 260.66 | — |
| C | 30 | 267.61 | — | 254.68 | 0.57 |
| C | 40 | 272.77 | — | 245.79 | 0.75 |
| C | 50 | 278.14 | — | 232.62 | 0.33 |
| C | 60 | 280.25 | 0.35 | 211.10 | 0.42 |
| C | 70 | 268.34 | 0.61 | 179.80 | 0.38 |
| L | 10 | 265.57 | 2.13 | 260.01 | 1.33 |
| L | 20 | 264.55 | 1.47 | 255.81 | 1.39 |
| L | 30 | 264.65 | 1.25 | 247.23 | 1.09 |
| L | 40 | 265.31 | 1.37 | 237.57 | 0.93 |
| L | 50 | 264.33 | 1.43 | 222.19 | 1.54 |
| L | 60 | 260.74 | 1.26 | 196.93 | 1.26 |
| L | 70 | 243.91 | 2.42 | 160.71 | 1.29 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| | 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|----------------------------|-----------|-----------|------------|---------|
| Scale Malfunction: 4.10 | | 9.54 | 11.32 | 11.96 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 18.2 | 23.7 | 20.8 | 21.1 | 22.1 | 22.1 |

Date: 7/23/81

Time: 1453-1515

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 294.99 | 0.67 | 296.56 | 0.22 |
| X | 20 | 295.74 | 0.97 | 294.43 | — |
| X | 30 | 297.21 | 0.45 | 290.66 | — |
| X | 40 | 298.81 | 1.01 | 285.27 | 0.71 |
| X | 50 | 300.57 | 0.37 | 274.72 | 0.92 |
| X | 60 | 299.36 | 0.83 | 258.65 | 0.79 |
| X | 70 | 288.70 | 0.91 | 234.71 | — |
| C | 10 | 291.94 | 0.56 | 292.61 | — |
| C | 20 | 293.43 | 0.74 | 290.30 | 0.54 |
| C | 30 | 295.83 | 0.31 | 287.27 | 0.19 |
| C | 40 | 299.07 | — | 281.86 | — |
| C | 50 | 301.99 | — | 271.54 | 0.96 |
| C | 60 | 299.47 | — | 253.10 | — |
| C | 70 | 282.58 | 0.74 | 224.82 | — |
| L | 10 | 282.18 | 2.14 | 277.59 | 1.15 |
| L | 20 | 281.71 | 1.58 | 273.55 | 1.03 |
| L | 30 | 281.39 | 1.69 | 267.81 | 1.29 |
| L | 40 | 279.37 | 1.89 | 259.31 | 1.42 |
| L | 50 | 275.59 | 1.65 | 246.25 | 0.93 |
| L | 60 | 268.63 | 1.78 | 222.73 | 1.42 |
| L | 70 | 249.34 | 1.60 | 187.98 | 1.50 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.04 | 2.12 | 9.43 | 9.86 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.3 | 38.5 | 38.5 | 39.7 | 35.8 | 32.0 |

Date: 8/3/81

Time: 0807-0840

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 267.07 | — | 265.01 | — |
| X | 20 | 269.25 | 0.71 | 262.63 | 0.14 |
| X | 30 | 273.27 | 0.79 | 258.58 | 0.30 |
| X | 40 | 276.50 | 1.04 | 249.00 | 0.44 |
| X | 50 | 282.92 | 0.87 | 240.03 | — |
| X | 60 | 284.05 | 0.19 | 215.52 | 0.60 |
| X | 70 | 277.11 | 0.53 | 180.52 | 0.80 |
| C | 10 | 274.22 | — | 275.31 | 0.45 |
| C | 20 | 275.60 | 0.45 | 272.23 | — |
| C | 30 | 278.46 | 0.80 | 266.98 | 0.22 |
| C | 40 | 282.04 | 0.54 | 258.03 | 1.13 |
| C | 50 | 286.73 | — | 244.93 | — |
| C | 60 | 287.18 | — | 223.56 | 0.36 |
| C | 70 | 273.62 | — | 191.54 | — |
| L | 10 | 269.68 | 1.67 | 265.17 | 1.51 |
| L | 20 | 272.73 | 1.66 | 267.57 | 3.47 |
| L | 30 | 278.88 | 1.70 | 256.08 | 1.10 |
| L | 40 | 272.05 | 1.19 | 246.68 | 1.34 |
| L | 50 | 271.74 | 1.45 | 231.97 | 1.32 |
| L | 60 | 265.85 | 1.99 | 206.59 | 0.96 |
| L | 70 | 248.82 | 0.96 | 169.55 | 1.31 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.91 | 4.55 | 7.43 | 9.08 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.3 | 27.8 | 23.5 | 23.4 | 24.8 | 23.9 |

Date: 8/4/81

Time: 0905-0930

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 225.59 | 0.61 | 218.85 | 0.40 |
| X | 20 | 227.18 | 0.45 | 213.50 | 0.42 |
| X | 30 | 229.45 | — | 204.21 | 0.78 |
| X | 40 | 238.67 | — | 196.33 | 0.82 |
| X | 50 | 248.67 | 0.20 | 179.82 | 0.18 |
| X | 60 | 258.70 | 0.63 | 158.91 | 0.20 |
| X | 70 | 263.61 | — | 141.90 | 0.51 |
| C | 10 | 211.10 | — | 209.73 | 0.80 |
| C | 20 | 212.19 | 0.30 | 202.11 | — |
| C | 30 | 218.69 | 0.46 | 192.89 | 0.60 |
| C | 40 | 229.50 | 0.44 | 180.59 | 0.64 |
| C | 50 | 244.94 | 0.20 | 164.88 | 0.35 |
| C | 60 | 260.14 | 0.44 | 144.67 | 0.72 |
| C | 70 | 269.37 | — | 123.80 | 0.58 |
| L | 10 | 234.44 | 1.58 | 226.79 | 1.20 |
| L | 20 | 236.49 | 1.08 | 222.34 | 1.10 |
| L | 30 | — | — | 211.63 | 1.49 |
| L | 40 | 240.12 | 1.85 | 200.18 | 1.44 |
| L | 50 | 246.62 | 1.74 | 185.96 | 1.39 |
| L | 60 | 249.58 | 1.70 | 162.09 | 1.58 |
| L | 70 | 247.07 | 1.90 | 131.96 | 0.87 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 13.77 | 11.78 | 12.41 | 11.98 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.1 | 27.9 | 25.7 | 25.1 | 25.3 | 23.3 |

Date: 8/5/81

Time:

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 263.68 | 0.91 | 259.55 | 0.49 |
| X | 20 | 261.26 | 0.64 | 251.60 | 0.32 |
| X | 30 | 262.08 | 0.40 | 243.47 | 0.74 |
| X | 40 | 268.25 | — | 234.79 | — |
| X | 50 | 273.16 | — | 218.86 | 0.84 |
| X | 60 | 277.41 | — | 197.65 | — |
| X | 70 | 274.45 | — | 170.94 | 0.42 |
| C | 10 | 257.01 | — | 256.09 | 0.70 |
| C | 20 | 257.14 | 0.24 | 250.13 | 0.72 |
| C | 30 | 261.20 | 0.78 | 242.57 | 0.70 |
| C | 40 | 268.22 | — | 230.90 | 0.84 |
| C | 50 | 275.89 | — | 215.00 | — |
| C | 60 | 282.39 | — | 192.70 | 0.62 |
| C | 70 | 277.29 | — | 162.56 | 0.43 |
| L | 10 | 254.86 | 1.52 | 250.44 | 0.99 |
| L | 20 | 258.31 | 1.81 | 246.88 | 1.29 |
| L | 30 | 260.20 | 2.14 | 239.04 | 1.08 |
| L | 40 | 261.34 | 2.17 | 228.24 | 1.44 |
| L | 50 | 263.34 | 1.70 | 214.59 | 1.62 |
| L | 60 | 262.66 | 1.39 | 190.32 | 1.18 |
| L | 70 | 249.38 | 0.83 | 153.80 | 1.17 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.95 | 9.67 | 10.64 | 11.40 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.0 | 31.1 | 26.8 | 25.9 | 26.1 | 24.0 |

Date: 8/26/81

Time: 0950-1018

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 282.50 | 0.79 | 280.40 | 0.43 |
| X | 20 | 282.37 | 0.65 | 276.24 | 0.41 |
| X | 30 | 284.15 | 1.07 | 271.72 | 0.48 |
| X | 40 | 285.96 | 1.05 | 262.43 | 0.35 |
| X | 50 | 287.20 | 0.59 | 248.41 | 0.41 |
| X | 60 | 286.26 | 0.75 | 227.43 | 0.43 |
| X | 70 | 276.69 | 0.96 | 196.76 | 0.45 |
| C | 10 | 278.02 | 0.58 | 277.49 | 0.31 |
| C | 20 | 279.35 | 0.44 | 274.73 | 0.31 |
| C | 30 | 282.42 | 0.29 | 270.39 | 0.30 |
| C | 40 | 285.55 | 0.92 | 261.23 | 0.29 |
| C | 50 | 288.56 | 0.83 | 246.73 | 0.26 |
| C | 60 | 287.48 | 0.43 | 225.06 | 0.33 |
| C | 70 | 274.03 | 0.95 | 194.26 | 0.31 |
| L | 10 | 258.21 | 1.84 | 252.84 | 1.49 |
| L | 20 | 262.07 | 1.85 | 251.79 | 1.16 |
| L | 30 | 265.38 | 2.00 | 247.71 | 1.42 |
| L | 40 | 266.20 | 1.61 | 238.75 | 1.03 |
| L | 50 | 267.23 | 1.83 | 224.93 | 1.17 |
| L | 60 | 262.88 | 1.46 | 200.06 | 1.37 |
| L | 70 | 247.35 | 1.36 | 167.12 | 0.95 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 2.30 | 5.43 | 8.43 | 10.00 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.9 | 34.0 | 25.1 | 23.4 | 24.0 | 24.0 |

Date: 8/27/81

Time: 0942-1002

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 278.03 | 1.03 | 276.07 | 0.44 |
| X | 20 | 278.88 | 0.84 | 273.40 | 0.50 |
| X | 30 | 281.97 | 0.96 | 269.77 | 0.44 |
| X | 40 | 285.11 | 0.98 | 262.35 | 0.51 |
| X | 50 | 287.26 | 1.00 | 249.35 | 0.44 |
| X | 60 | 287.11 | 0.97 | 231.49 | 0.44 |
| X | 70 | 274.17 | 0.95 | 198.50 | 0.47 |
| C | 10 | 277.27 | 0.32 | 276.49 | 0.29 |
| C | 20 | 278.07 | 1.07 | 274.45 | 0.24 |
| C | 30 | 281.95 | 0.63 | 270.21 | 0.37 |
| C | 40 | 286.53 | 0.36 | 262.69 | 0.31 |
| C | 50 | 289.91 | 0.95 | 250.76 | 0.21 |
| C | 60 | 288.49 | 0.26 | 231.00 | 0.32 |
| C | 70 | 273.30 | 1.06 | 201.32 | 0.34 |
| L | 10 | 268.70 | 1.20 | 263.62 | 1.31 |
| L | 20 | 268.50 | 1.63 | 259.29 | 1.36 |
| L | 30 | 268.35 | 1.32 | 251.99 | 1.48 |
| L | 40 | 267.17 | 1.80 | 242.16 | 1.20 |
| L | 50 | 268.12 | 1.53 | 228.49 | 1.06 |
| L | 60 | 263.48 | 1.33 | 205.93 | 1.25 |
| L | 70 | 247.36 | 1.83 | 172.95 | 1.12 |
| P | 10 | 249.71 | 1.88 | 247.54 | 1.81 |
| P | 20 | 254.98 | 1.68 | 246.77 | 1.45 |
| P | 30 | 256.11 | 2.25 | 244.71 | 2.03 |
| P | 40 | 262.72 | 2.40 | 240.15 | 1.72 |
| P | 50 | 263.37 | 2.64 | 223.09 | 1.92 |
| P | 60 | 262.21 | 1.95 | 206.77 | 1.45 |
| P | 70 | 252.22 | 1.62 | 171.60 | 1.78 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 2.27 | 5.65 | 8.29 | 9.21 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.6 | 30.0 | 28.1 | 24.5 | 24.5 | 22.6 |

*P-Band measurements made during 1356-1416 P.M.

Date: 8/28/81

Time: 0944-1033

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 286.02 | 1.04 | 284.38 | 0.46 |
| X | 20 | 287.12 | 0.90 | 281.96 | 0.47 |
| X | 30 | 289.19 | 1.03 | 280.57 | 0.42 |
| X | 40 | 290.36 | 0.96 | 273.83 | 0.33 |
| X | 50 | 292.51 | 0.98 | 259.73 | 0.37 |
| X | 60 | 289.55 | 1.11 | 248.68 | 0.42 |
| X | 70 | 280.33 | 0.84 | 215.16 | 0.53 |
| C | 10 | 285.61 | 0.82 | 285.62 | 0.33 |
| C | 20 | 286.70 | 0.21 | 283.39 | 0.31 |
| C | 30 | 288.59 | 0.58 | 279.19 | 0.26 |
| C | 40 | 291.23 | 0.36 | 272.24 | 0.37 |
| C | 50 | 292.87 | 0.24 | 259.34 | 0.29 |
| C | 60 | 290.30 | 0.37 | 237.20 | 0.31 |
| C | 70 | 275.06 | 0.34 | 206.98 | 0.30 |
| L | 10 | 269.53 | 1.39 | 264.88 | 1.12 |
| L | 20 | 269.54 | 1.49 | 259.71 | 1.30 |
| L | 30 | 268.27 | 1.43 | 251.28 | 1.13 |
| L | 40 | 267.29 | 1.69 | 242.44 | 0.91 |
| L | 50 | 267.54 | 1.24 | 227.94 | 0.97 |
| L | 60 | 262.28 | 1.36 | 202.13 | 1.27 |
| L | 70 | 246.84 | 1.85 | 167.11 | 1.41 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.81 | 5.33 | 7.94 | 9.62 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.9 | 31.3 | 29.2 | 25.4 | 24.0 | 23.0 |

Date: 9/1/81

Time: 1043-1104

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 212.87 | 0.60 | 205.44 | 0.59 |
| X | 20 | 214.48 | 0.60 | 197.20 | 0.57 |
| X | 30 | 219.48 | 0.66 | 184.99 | 0.56 |
| X | 40 | 228.42 | 0.60 | 168.06 | 0.64 |
| X | 50 | 243.53 | 0.69 | 157.62 | 0.64 |
| X | 60 | 258.78 | 0.72 | 131.52 | 0.67 |
| X | 70 | 270.34 | 0.77 | 108.58 | 0.66 |
| C | 10 | 197.32 | 0.47 | 192.44 | 0.42 |
| C | 20 | 202.59 | 0.23 | 187.90 | 0.54 |
| C | 30 | 213.68 | 0.46 | 181.36 | 0.45 |
| C | 40 | 226.19 | 0.26 | 169.60 | 0.55 |
| C | 50 | 240.80 | 0.41 | 153.66 | 0.51 |
| C | 60 | 259.61 | 0.30 | 136.31 | 0.53 |
| C | 70 | 271.78 | 0.37 | 112.75 | 0.59 |
| L | 10 | 210.15 | 1.83 | 201.82 | 1.20 |
| L | 20 | 215.77 | 1.69 | 199.23 | 1.32 |
| L | 30 | 219.55 | 1.39 | 191.37 | 1.17 |
| L | 40 | 224.14 | 1.76 | 179.72 | 0.96 |
| L | 50 | 234.49 | 1.15 | 168.11 | 1.09 |
| L | 60 | 240.07 | 1.63 | 146.55 | 1.09 |
| L | 70 | 241.57 | 1.38 | 118.98 | 1.60 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 14.35 | 14.92 | 13.91 | 13.69 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.1 | 26.8 | 24.6 | 24.2 | 25.0 | 23.3 |

Date: 9/2/81

Time: 0931-0952

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 222.17 | 0.70 | 215.68 | 0.45 |
| X | 20 | 222.25 | 0.61 | 209.45 | 0.46 |
| X | 30 | 227.74 | 0.64 | 201.67 | 0.53 |
| X | 40 | 236.33 | 0.71 | 192.28 | 0.48 |
| X | 50 | 247.88 | 0.71 | 165.82 | 0.51 |
| X | 60 | 260.11 | 0.79 | 152.13 | 0.50 |
| X | 70 | 269.34 | 0.44 | 122.17 | 0.73 |
| C | 10 | 212.28 | 0.28 | 207.25 | 0.41 |
| C | 20 | 212.42 | 0.56 | 200.61 | 0.46 |
| C | 30 | 221.07 | 0.17 | 192.86 | 0.40 |
| C | 40 | 232.07 | 0.66 | 180.44 | 0.47 |
| C | 50 | 248.11 | 0.45 | 164.95 | 0.41 |
| C | 60 | 263.54 | 0.24 | 143.01 | 0.48 |
| C | 70 | 272.34 | 0.32 | 121.90 | 0.49 |
| L | 10 | 222.71 | 1.54 | 215.39 | 1.39 |
| L | 20 | 228.88 | 1.30 | 216.04 | 1.64 |
| L | 30 | 233.47 | 1.78 | 208.49 | 1.18 |
| L | 40 | 236.27 | 1.80 | 196.06 | 1.16 |
| L | 50 | 243.03 | 1.44 | 181.25 | 1.16 |
| L | 60 | 247.69 | 2.09 | 158.64 | 1.24 |
| L | 70 | 243.40 | 1.64 | 127.07 | 1.32 * |
| P | 10 | 239.58 | 2.15 | 239.41 | 1.60 |
| P | 20 | 237.13 | 1.76 | 235.54 | 2.00 |
| P | 30 | 241.19 | 1.80 | 227.03 | 1.59 |
| P | 40 | 244.17 | 2.05 | 218.63 | 1.72 |
| P | 50 | 250.14 | 2.07 | 203.41 | 1.93 |
| P | 60 | 252.96 | 1.45 | 181.38 | 1.56 |
| P | 70 | 246.51 | 1.53 | 158.58 | 1.30 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 13.93 | 12.52 | 12.61 | 12.90 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.8 | 23.5 | 22.7 | 22.5 | 23.5 | 22.1 |
| 27.6 | 30.5 | 27.9 | 26.6 | 27.0 | 24.4* |

* P-Band measurements made during 1411-1425

Date: 9/3/81

Time: 0925-0946

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 229.57 | 0.76 | 223.93 | 0.52 |
| X | 20 | 237.52 | 0.75 | 225.24 | 0.63 |
| X | 30 | 241.18 | 0.72 | 215.56 | 0.43 |
| X | 40 | 248.90 | 0.82 | 203.56 | 0.55 |
| X | 50 | 256.85 | 0.58 | 183.91 | 0.48 |
| X | 60 | 267.41 | 0.78 | 160.78 | 0.55 |
| X | 70 | 272.54 | 0.82 | 137.90 | 0.59 |
| C | 10 | 226.93 | 0.31 | 222.85 | 0.43 |
| C | 20 | 227.49 | 0.56 | 216.11 | 0.38 |
| C | 30 | 233.56 | 0.27 | 208.00 | 0.51 |
| C | 40 | 243.78 | 0.23 | 196.33 | 0.48 |
| C | 50 | 255.52 | 0.22 | 180.99 | 0.41 |
| C | 60 | 267.56 | 0.53 | 158.28 | 0.47 |
| C | 70 | 273.64 | 0.26 | 138.30 | 0.53 |
| L | 10 | 235.37 | 1.66 | 229.68 | 1.09 |
| L | 20 | 234.82 | 1.56 | 221.49 | 1.29 |
| L | 30 | 237.62 | 1.56 | 214.30 | 1.11 |
| L | 40 | 241.91 | 1.52 | 203.40 | 0.99 |
| L | 50 | 247.72 | 1.97 | 190.74 | 0.97 |
| L | 60 | 253.13 | 2.63 | 165.47 | 1.21 |
| L | 70 | 247.16 | 1.59 | 138.20 | 1.10 |
| P | 10 | 247.35 | 2.39 | — | — * |
| P | 20 | 244.26 | 1.98 | 242.77 | 1.66 |
| P | 30 | 250.36 | 1.52 | 237.17 | 1.69 |
| P | 40 | 256.57 | 2.15 | 229.73 | 1.56 |
| P | 50 | 252.80 | 2.26 | 203.78 | 1.88 |
| P | 60 | 254.79 | 2.48 | 180.58 | 1.78 |
| P | 70 | — | — | 158.95 | 1.72 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 7.93 | 10.98 | 11.34 | 11.32 |
| 7.05 | 8.63 | 10.05 | 11.52* |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.6 | 23.0 | 22.0 | 22.2 | 23.0 | 22.1 |
| 26.5 | 27.0 | 25.4 | 24.6 | 26.0 | 24.8* |

* P-Band measurements made during 1308-1328 p.m.

Date: 9/4/81

Time: 0837-0853

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 243.44 | 0.62 | 238.47 | 0.48 |
| X | 20 | 247.04 | 0.81 | 235.19 | 0.38 |
| X | 30 | 254.55 | 0.86 | 232.52 | 0.49 |
| X | 40 | 260.51 | 0.85 | 227.59 | 0.40 |
| X | 50 | 266.94 | 0.69 | 214.54 | 0.45 |
| X | 60 | 272.09 | 0.55 | 197.60 | 0.52 |
| X | 70 | 272.34 | 0.74 | 152.48 | 0.43 |
| C | 10 | 234.84 | 0.72 | 232.79 | 0.36 |
| C | 20 | 237.64 | 0.33 | 227.44 | 0.44 |
| C | 30 | 243.70 | 0.58 | 219.72 | 0.42 |
| C | 40 | 252.52 | 0.41 | 209.42 | 0.45 |
| C | 50 | 262.97 | 0.60 | 192.47 | 0.36 |
| C | 60 | 272.71 | 0.31 | 170.08 | 0.38 |
| C | 70 | 271.44 | 0.26 | 143.74 | 0.48 |
| L | 10 | 244.23 | 1.85 | 237.42 | 1.32 |
| L | 20 | 246.06 | 2.18 | 230.70 | 1.45 |
| L | 30 | 244.96 | 1.73 | 220.71 | 1.14 |
| L | 40 | 248.05 | 1.57 | 211.64 | 1.27 |
| L | 50 | 251.31 | 1.72 | 195.60 | 1.09 |
| L | 60 | 255.71 | 1.71 | 172.95 | 0.90 |
| L | 70 | 248.86 | 1.86 | 146.43 | 1.15 |
| P | 10 | 249.39 | 1.87 | — | — * |
| P | 20 | 247.21 | 1.88 | 248.45 | 1.78 |
| P | 30 | 252.83 | 1.70 | 234.23 | 1.78 |
| P | 40 | 255.92 | 1.65 | 225.30 | 1.67 |
| P | 50 | 254.77 | 2.28 | 205.67 | 1.69 |
| P | 60 | 258.31 | 1.65 | 180.05 | 1.59 |
| P | 70 | 246.38 | 2.46 | 150.07 | 1.93 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 7.69 | 10.56 | 11.09 | 11.66 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 2.05 | 21.5 | 19.6 | 20.0 | 22.0 | 20.9 |

* P-Band measurements made during 1018-1031 a.m.

Date: 9/11/81

Time: 0949-1012

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 275.59 | 1.09 | 273.48 | 0.51 |
| X | 20 | 275.13 | 0.86 | 268.30 | 0.62 |
| X | 30 | 277.39 | 1.18 | 263.42 | 0.34 |
| X | 40 | 281.00 | 0.87 | 256.07 | 0.55 |
| X | 50 | 282.16 | 0.77 | 240.35 | 0.51 |
| X | 60 | 284.46 | 1.03 | 222.11 | 0.51 |
| X | 70 | 275.13 | 0.61 | 189.91 | 0.53 |
| C | 10 | 270.16 | 0.51 | 269.58 | 0.45 |
| C | 20 | 271.81 | 0.76 | 266.04 | 0.36 |
| C | 30 | 274.42 | 0.89 | 259.33 | 0.30 |
| C | 40 | 279.25 | 0.80 | 250.65 | 0.38 |
| C | 50 | 283.88 | 0.60 | 235.76 | 0.33 |
| C | 60 | 284.08 | 0.34 | 213.67 | 0.34 |
| C | 70 | 272.75 | 0.48 | 182.64 | 0.34 |
| L | 10 | 257.33 | 1.72 | 254.02 | 1.89 |
| L | 20 | 259.20 | 2.10 | 248.70 | 1.31 |
| L | 30 | 256.52 | 1.95 | 238.70 | 1.15 |
| L | 40 | 258.46 | 1.73 | 229.17 | 1.01 |
| L | 50 | 259.60 | 1.44 | 213.60 | 1.43 |
| L | 60 | 259.68 | 1.64 | 190.62 | 0.86 |
| L | 70 | 247.71 | 1.13 | 160.32 | 1.21 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 4.78 | 7.33 | 9.17 | 9.67 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.0 | 28.0 | 24.8 | 21.6 | 21.3 | 18.4 |

Date: 9/14/81

Time: 0944-1004

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 281.81 | 0.99 | 280.19 | 0.41 |
| X | 20 | 282.18 | 0.89 | 276.26 | 0.43 |
| X | 30 | 283.55 | 1.06 | 270.57 | 0.41 |
| X | 40 | 285.69 | 0.59 | 262.73 | 0.52 |
| X | 50 | 288.58 | 0.99 | 249.83 | 0.49 |
| X | 60 | 287.03 | 1.04 | 227.50 | 0.46 |
| X | 70 | 275.41 | 1.01 | 195.91 | 0.49 |
| C | 10 | 277.57 | 0.27 | 277.51 | 0.32 |
| C | 20 | 278.06 | 0.34 | 273.68 | 0.31 |
| C | 30 | 280.85 | 0.56 | 267.76 | 0.30 |
| C | 40 | 284.93 | 0.54 | 259.03 | 0.26 |
| C | 50 | 289.28 | 0.64 | 244.48 | 0.29 |
| C | 60 | 288.62 | 0.28 | 222.33 | 0.30 |
| C | 70 | 274.61 | 0.42 | 191.08 | 0.40 |
| L | 10 | 260.88 | 1.96 | 257.79 | 1.52 |
| L | 20 | 260.55 | 1.44 | 251.58 | 1.38 |
| L | 30 | 260.73 | 1.49 | 243.40 | 1.24 |
| L | 40 | 261.36 | 1.76 | 232.82 | 1.50 |
| L | 50 | 263.58 | 1.37 | 215.20 | 0.99 |
| L | 60 | 262.91 | 1.65 | 191.27 | 1.11 |
| L | 70 | 247.95 | 1.67 | 158.07 | 1.45 |
| P | 10 | 242.78 | 2.06 | 241.83 | 1.67 |
| P | 20 | 243.74 | 2.23 | 235.70 | 2.10 |
| P | 30 | 246.46 | 2.59 | 233.05 | 2.12 |
| P | 40 | 250.46 | 2.14 | 219.81 | 1.95 |
| P | 50 | 253.53 | 2.25 | 204.13 | 2.63 |
| P | 60 | 254.44 | 2.32 | 181.17 | 2.21 |
| P | 70 | 236.22 | 1.84 | 147.59 | 1.41 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 2.84 | 5.28 | 7.83 | 8.96 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.5 | 32.0 | 26.7 | 23.9 | 24.0 | 21.2 |

* P-Band measurements made during 1350-1404 p.m.

Date: 9/15/81

Time: 0843-0914

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | | | | |
| X | 20 | | | | |
| X | 30 | | | | |
| X | 40 | | | | |
| X | 50 | | | | |
| X | 60 | | | | |
| X | 70 | | | | |
| C | 10 | | | | |
| C | 20 | | | | |
| C | 30 | | | | |
| C | 40 | | | | |
| C | 50 | | | | |
| C | 60 | | | | |
| C | 70 | | | | |
| L | 10 | | | | |
| L | 20 | | | | |
| L | 30 | | | | |
| L | 40 | | | | |
| L | 50 | | | | |
| L | 60 | | | | |
| L | 70 | | | | |
| P | 10 | 247.43 | 1.87 | 240.13 | 1.82 |
| P | 20 | 247.99 | 2.15 | 235.57 | 2.20 |
| P | 30 | 252.45 | 2.01 | 231.59 | 1.93 |
| P | 40 | 257.21 | 1.78 | 221.49 | 1.82 |
| P | 50 | 260.06 | 2.19 | 206.37 | 1.51 |
| P | 60 | 258.47 | 2.29 | 182.02 | 1.87 |
| P | 70 | 251.00 | 1.92 | 153.35 | 1.97 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 2.71 | 6.35 | 8.30 | 4.58 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 21.7 | 20.0 | 20.2 | 20.8 | 22.5 | 22.5 |

Date: 9/17/81

Time: 1204-1222

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 204.24 | 0.65 | 197.65 | 0.51 |
| X | 20 | 209.11 | 0.60 | 193.05 | 0.59 |
| X | 30 | 216.60 | 0.74 | 183.59 | 0.56 |
| X | 40 | 225.45 | 0.67 | 169.96 | 0.64 |
| X | 50 | 239.15 | 0.66 | 153.41 | 0.51 |
| X | 60 | 256.04 | 0.82 | 130.75 | 0.64 |
| X | 70 | 267.55 | 0.66 | 104.98 | 0.75 |
| C | 10 | 191.28 | 0.24 | 186.73 | 0.46 |
| C | 20 | 192.65 | 0.49 | 180.19 | 0.43 |
| C | 30 | 200.91 | 0.22 | 171.34 | 0.45 |
| C | 40 | 213.20 | 0.27 | 158.66 | 0.42 |
| C | 50 | 229.44 | 0.36 | 143.07 | 0.50 |
| C | 60 | 251.50 | 0.56 | 122.04 | 0.55 |
| C | 70 | 267.69 | 0.71 | 103.62 | 0.61 |
| L | 10 | 201.98 | 1.84 | 193.13 | 1.75 |
| L | 20 | 204.13 | 1.23 | 188.49 | 1.04 |
| L | 30 | 207.81 | 1.80 | 179.10 | 1.00 |
| L | 40 | 214.62 | 1.16 | 167.69 | 1.18 |
| L | 50 | 223.22 | 1.71 | 153.07 | 1.22 |
| L | 60 | 233.06 | 1.58 | 128.96 | 1.14 |
| L | 70 | 236.23 | 1.27 | 102.38 | 1.06 |
| P | 10 | 216.27 | 2.09 | 204.45 | 1.97 * |
| P | 20 | 223.80 | 2.14 | 203.35 | 2.38 |
| P | 30 | 226.08 | 2.50 | 192.07 | 1.84 |
| P | 40 | 240.06 | 2.03 | 181.09 | 1.87 |
| P | 50 | 246.51 | 1.65 | 166.31 | 2.36 |
| P | 60 | 253.58 | 2.34 | 138.79 | 2.28 |
| P | 70 | 239.36 | 2.44 | 106.10 | 1.72 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 15.28 | 14.70 | 12.69 | 13.31 |
| 13.09 | 18.15 | 16.18 | 19.94 * |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 21.2 | 22.0 | 21.7 | 21.2 | 22.5 | 21.4 |
| 18.0 | 19.0 | 18.7 | 19.0 | 21.0 | 20.0 * |

* P-Band measurements made during 0901-0921 a.m.

Date: 9/18/81

Time: 1211-1230

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 202.90 | 0.66 | 195.69 | 0.54 |
| X | 20 | 207.06 | 0.52 | 191.94 | 0.50 |
| X | 30 | 213.53 | 0.43 | 182.87 | 0.51 |
| X | 40 | 222.73 | 0.67 | 170.01 | 0.54 |
| X | 50 | 236.23 | 0.57 | 154.24 | 0.60 |
| X | 60 | 251.03 | 0.67 | 135.90 | 0.57 |
| X | 70 | 261.21 | 0.70 | 110.56 | 0.82 |
| C | 10 | 185.86 | 0.31 | 180.82 | 0.43 |
| C | 20 | 188.50 | 0.26 | 174.33 | 0.53 |
| C | 30 | 194.67 | 0.32 | 165.11 | 0.49 |
| C | 40 | 206.12 | 0.21 | 153.02 | 0.44 |
| C | 50 | 223.37 | 0.20 | 137.09 | 0.43 |
| C | 60 | 243.35 | 0.67 | 117.77 | 0.57 |
| C | 70 | 260.44 | 0.34 | 99.94 | 0.53 |
| L | 10 | 194.22 | 2.19 | 183.47 | 1.54 |
| L | 20 | 196.01 | 1.72 | 177.12 | 1.29 |
| L | 30 | 200.09 | 1.84 | 169.61 | 1.33 |
| L | 40 | 205.68 | 1.54 | 159.17 | 1.35 |
| L | 50 | 214.75 | 1.71 | 143.59 | 1.51 |
| L | 60 | 224.90 | 1.65 | 122.19 | 1.24 |
| L | 70 | 230.08 | 1.78 | 93.90 | 1.23 |
| P | 10 | 206.60 | 2.12 | 199.51 | 2.12 * |
| P | 20 | 213.67 | 1.75 | 201.06 | 2.09 |
| P | 30 | 220.06 | 2.11 | 183.97 | 1.68 |
| P | 40 | 228.45 | 2.54 | 171.78 | 1.63 |
| P | 50 | 239.47 | 2.00 | 160.71 | 2.82 |
| P | 60 | 249.82 | 1.77 | 130.60 | 2.18 |
| P | 70 | 239.07 | 2.55 | 101.19 | 1.85 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 16.49 | 15.97 | 14.83 | 15.46 |
| 15.22 | 15.46 | 14.33 | 14.82 * |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 16.5 | 15.3 | 16.1 | 16.3 | 18.3 | 17.5 |
| 15.8 | 15.8 | 15.7 | 16.0 | 18.0 | 18.0 * |

* P-Band measurements made during 0834-1003 a.m.

Date: 9/28/81

Time: 0942-1002

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 272.94 | 0.88 | 271.28 | 0.50 |
| X | 20 | 273.53 | 0.86 | 269.17 | 0.47 |
| X | 30 | 275.84 | 1.02 | 265.41 | 0.45 |
| X | 40 | 277.38 | 0.82 | 252.97 | 0.41 |
| X | 50 | 279.24 | 0.95 | 246.61 | 0.41 |
| X | 60 | 278.99 | 0.95 | 221.95 | 0.43 |
| X | 70 | 266.61 | 0.73 | 182.83 | 0.41 |
| C | 10 | 263.34 | 0.40 | 262.10 | 0.30 |
| C | 20 | 263.97 | 0.29 | 257.85 | 0.33 |
| C | 30 | 267.55 | 0.35 | 250.85 | 0.31 |
| C | 40 | 272.04 | 0.74 | 240.46 | 0.39 |
| C | 50 | 277.38 | 0.30 | 224.24 | 0.35 |
| C | 60 | 278.90 | 0.63 | 198.92 | 0.32 |
| C | 70 | 266.68 | 0.30 | 171.97 | 0.35 |
| L | 10 | 243.93 | 1.87 | 239.15 | 1.31 |
| L | 20 | 244.20 | 1.37 | 234.44 | 1.48 |
| L | 30 | 245.34 | 1.34 | 224.88 | 1.18 |
| L | 40 | 248.24 | 1.87 | 215.41 | 1.21 |
| L | 50 | 249.88 | 1.45 | 198.10 | 1.40 |
| L | 60 | 249.81 | 1.83 | 171.65 | 1.18 |
| L | 70 | 238.46 | 1.46 | 142.29 | 1.31 |
| P | 10 | 242.24 | 2.00 | 238.37 | 2.26 |
| P | 20 | 245.64 | 2.91 | 237.69 | 2.48 |
| P | 30 | 248.98 | 2.09 | 232.78 | 2.59 |
| P | 40 | 252.73 | 2.60 | 221.19 | 1.91 |
| P | 50 | 256.62 | 2.87 | 208.25 | 2.06 |
| P | 60 | 265.10 | 3.41 | — | — |
| P | 70 | 244.74 | 2.64 | 149.32 | 2.38 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 3.05 | 6.18 | 8.80 | 9.99 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 19.0 | 20.0 | 18.6 | 17.6 | 19.0 | 18.0 |

* P-Band measurements made during 1049-1112 a.m.

Date: 9/29/81

Time: 0946-1005

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 267.06 | 0.76 | 265.87 | 0.43 |
| X | 20 | 267.31 | 0.81 | 261.60 | 0.45 |
| X | 30 | 269.73 | 0.81 | 255.78 | 0.47 |
| X | 40 | 272.35 | 0.90 | 246.56 | 0.51 |
| X | 50 | 275.98 | 0.81 | 234.73 | 0.41 |
| X | 60 | 276.54 | 0.74 | 211.19 | 0.44 |
| X | 70 | 267.33 | 0.55 | 177.77 | 0.53 |
| C | 10 | 259.80 | 0.45 | 258.42 | 0.39 |
| C | 20 | 260.79 | 0.61 | 254.63 | 0.35 |
| C | 30 | 264.68 | 0.23 | 248.65 | 0.34 |
| C | 40 | 268.76 | 0.42 | 236.76 | 0.36 |
| C | 50 | 274.59 | 0.42 | 221.09 | 0.26 |
| C | 60 | 276.45 | 0.64 | 197.85 | 0.38 |
| C | 70 | 266.29 | 0.26 | 169.80 | 0.44 |
| L | 10 | 241.51 | 1.57 | 236.44 | 1.06 |
| L | 20 | 244.88 | 1.66 | 234.54 | 1.14 |
| L | 30 | 246.05 | 1.22 | 227.14 | 1.01 |
| L | 40 | 244.92 | 1.52 | 213.30 | 1.22 |
| L | 50 | 246.81 | 1.43 | 196.15 | 0.98 |
| L | 60 | 247.85 | 1.77 | 172.47 | 1.14 |
| L | 70 | 238.51 | 1.24 | 143.14 | 1.13 |
| P | 10 | 236.94 | 2.29 | 234.60 | 2.33 * |
| P | 20 | 236.37 | 2.04 | 225.88 | 1.79 |
| P | 30 | 245.83 | 2.61 | 227.18 | 2.31 |
| P | 40 | 250.49 | 2.33 | 219.47 | 2.42 |
| P | 50 | 251.32 | 2.56 | 202.09 | 2.61 |
| P | 60 | 252.96 | 2.76 | 179.30 | 2.33 |
| P | 70 | 242.63 | 2.79 | 148.58 | 3.03 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 3.01 | 7.00 | 8.74 | 10.27 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 14.8 | 19.3 | 17.8 | 13.5 | 14.8 | 14.1 |
| 15.5 | 25.0 | 20.0 | 16.2 | 16.0 | 15.4 * |

* P-Band measurements made during 1053-1117 a.m.

Date: 9/30/81

Time: 1137-1152

Plot No.: 121

Field: Bare

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 270.65 | 0.82 | 272.07 | 0.45 |
| X | 20 | 270.60 | 0.76 | 267.93 | 0.44 |
| X | 30 | 273.06 | 0.76 | 263.18 | 0.42 |
| X | 40 | 275.39 | 0.86 | 255.83 | 0.49 |
| X | 50 | 277.92 | 0.73 | 241.76 | 0.49 |
| X | 60 | 278.14 | 0.97 | 223.97 | 0.46 |
| X | 70 | 265.34 | 0.78 | 189.40 | 0.42 |
| C | 10 | 266.10 | 0.34 | 265.21 | 0.33 |
| C | 20 | 267.23 | 0.66 | 262.26 | 0.32 |
| C | 30 | 270.86 | 0.88 | 256.26 | 0.40 |
| C | 40 | 275.35 | 0.37 | 247.41 | 0.30 |
| C | 50 | 279.45 | 0.28 | 232.22 | 0.33 |
| C | 60 | 279.92 | 0.63 | 209.20 | 0.29 |
| C | 70 | 265.94 | 0.58 | 177.32 | 0.41 |
| L | 10 | 247.08 | 1.88 | 242.40 | 1.28 |
| L | 20 | 248.02 | 1.30 | 238.13 | 1.06 |
| L | 30 | 248.01 | 1.94 | 229.52 | 1.27 |
| L | 40 | 248.94 | 1.24 | 218.43 | 1.01 |
| L | 50 | 249.28 | 1.53 | 200.72 | 0.88 |
| L | 60 | 249.52 | 1.30 | 175.36 | 1.21 |
| L | 70 | 236.96 | 1.47 | 141.69 | 1.00 |
| P | 10 | 241.30 | 1.84 | 238.54 | 2.42 * |
| P | 20 | 248.93 | 2.32 | 226.26 | 2.61 |
| P | 30 | 253.01 | 2.34 | 231.64 | 2.22 |
| P | 40 | 254.76 | 2.53 | 225.05 | 2.76 |
| P | 50 | 257.88 | 2.98 | 212.92 | 4.00 |
| P | 60 | 259.32 | 2.32 | 186.40 | 2.56 |
| P | 70 | 247.79 | 2.71 | 153.21 | 2.49 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.30 | 5.76 | 8.43 | 9.67 |
| 3.10 | 8.39 | 9.87 | 11.01 * |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 16.3 | 21.0 | 18.2 | 17.3 | 18.0 | 17.8 |
| 15.3 | 16.0 | 15.0 | 15.1 | 17.0 | 17.0 * |

* P-Band measurements made during 0837-0902 a.m.

Date: 6/24/81

Time: 0930-1000

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 288.67 | 0.36 | 286.28 | — |
| X | 20 | 289.36 | 0.59 | 284.37 | — |
| X | 30 | 289.39 | 1.29 | 280.47 | 0.49 |
| X | 40 | 290.73 | — | 275.58 | 0.77 |
| X | 50 | 291.21 | 0.54 | 268.59 | 0.61 |
| X | 60 | 289.61 | 0.83 | 259.67 | — |
| X | 70 | 282.78 | 1.13 | 242.48 | — |
| C | 10 | 289.60 | — | 290.12 | 0.90 |
| C | 20 | 289.80 | 0.86 | 288.10 | — |
| C | 30 | 290.91 | — | 285.32 | — |
| C | 40 | 292.65 | 0.98 | 281.20 | 0.78 |
| C | 50 | 293.49 | 0.74 | 273.84 | 0.45 |
| C | 60 | 291.09 | — | 260.22 | 0.33 |
| C | 70 | 277.69 | 0.48 | 233.57 | — |
| L | 10 | 272.85 | 2.09 | 270.54 | 1.34 |
| L | 20 | 272.99 | 1.71 | 267.74 | 0.83 |
| L | 30 | 271.54 | 1.54 | 259.73 | 1.01 |
| L | 40 | 271.59 | 1.27 | 251.49 | 1.06 |
| L | 50 | 269.40 | 1.32 | 238.48 | 1.26 |
| L | 60 | 263.90 | 1.53 | 215.02 | 1.19 |
| L | 70 | 246.20 | 1.37 | 179.92 | 1.18 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.84 | 6.32 | 10.92 | 10.48 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.9 | 34.7 | 28.5 | 25.8 | 25.8 | 25.2 |

Date: 7/13/81

Time: 0847-0958

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 286.56 | — | 285.45 | 1.00 |
| X | 20 | 285.84 | 0.61 | 283.54 | 0.72 |
| X | 30 | 286.53 | 0.87 | 283.09 | 0.54 |
| X | 40 | 285.88 | — | 281.82 | — |
| X | 50 | 284.61 | 0.19 | 278.33 | — |
| X | 60 | 283.19 | 1.07 | 275.16 | 0.83 |
| X | 70 | 275.45 | 1.00 | 264.18 | 0.14 |
| C | 10 | 289.11 | 0.75 | 290.37 | — |
| C | 20 | 289.61 | — | 289.42 | 1.08 |
| C | 30 | 290.54 | — | 287.85 | — |
| C | 40 | 291.60 | 0.63 | 285.72 | — |
| C | 50 | 291.79 | 0.16 | 283.19 | 1.15 |
| C | 60 | 290.97 | — | 278.83 | — |
| C | 70 | 285.41 | 1.57 | 271.82 | 1.10 |
| L | 10 | 293.76 | 2.06 | 292.11 | 1.21 |
| L | 20 | 292.31 | 1.79 | 289.18 | 0.96 |
| L | 30 | 290.56 | 1.65 | 284.87 | 1.08 |
| L | 40 | 287.07 | 1.84 | 280.99 | 1.11 |
| L | 50 | 283.35 | 2.14 | 275.44 | 1.63 |
| L | 60 | 277.18 | 1.42 | 268.11 | 1.53 |
| L | 70 | | | | |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.14 | 3.31 | 6.46 | 6.93 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.3 | 27.1 | 25.4 | 24.6 | 25.5 | 23.8 |

Date: 7/14/81

Time: 0831-0857

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 286.08 | 0.74 | 285.05 | 0.55 |
| X | 20 | 286.16 | — | 283.68 | 0.43 |
| X | 30 | 286.24 | 0.92 | 282.67 | — |
| X | 40 | 285.37 | 0.82 | 281.26 | 0.56 |
| X | 50 | 283.06 | 0.10 | 277.67 | — |
| X | 60 | 281.41 | 0.63 | 274.55 | 0.99 |
| X | 70 | 275.25 | 1.37 | 267.10 | — |
| C | 10 | 285.70 | — | 286.89 | 0.27 |
| C | 20 | 286.15 | 0.73 | 285.70 | 0.52 |
| C | 30 | 287.35 | 1.03 | 284.23 | — |
| C | 40 | 288.75 | — | 282.75 | — |
| C | 50 | 289.39 | 0.65 | 281.16 | — |
| C | 60 | 288.57 | 0.94 | 278.63 | 0.30 |
| C | 70 | 284.12 | 1.47 | 273.35 | 0.43 |
| L | 10 | — | — | 292.00 | 1.30 |
| L | 20 | 292.25 | 1.65 | 289.25 | 1.47 |
| L | 30 | 289.71 | 1.94 | 284.86 | 1.25 |
| L | 40 | 287.61 | 2.31 | 281.09 | 1.24 |
| L | 50 | 282.38 | 1.58 | 275.59 | 1.02 |
| L | 60 | 276.51 | 1.54 | 268.20 | 1.39 |
| L | 70 | 263.28 | 2.16 | 260.89 | 1.29 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.35 | 1.83 | 4.68 | 4.57 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.7 | 26.7 | 24.2 | 23.5 | 24.5 | 23.0 |

Date: 7/21/81

Time: 0831-0901

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.52 | 1.28 | 278.71 | 0.43 |
| X | 20 | 281.18 | — | 278.52 | 0.84 |
| X | 30 | 280.25 | — | 276.75 | 0.78 |
| X | 40 | 280.30 | 1.02 | 275.48 | 0.32 |
| X | 50 | 280.53 | 0.48 | 275.30 | 0.28 |
| X | 60 | 278.40 | — | 270.83 | — |
| X | 70 | 273.23 | 0.54 | 264.47 | — |
| C | 10 | 271.15 | — | 272.47 | — |
| C | 20 | 272.48 | 0.33 | 272.26 | 0.45 |
| C | 30 | 274.38 | — | 272.22 | 0.75 |
| C | 40 | 277.32 | — | 272.92 | 0.40 |
| C | 50 | 279.61 | — | 272.28 | 0.99 |
| C | 60 | 280.40 | — | 272.30 | 0.27 |
| C | 70 | 277.18 | 0.54 | 267.68 | 0.36 |
| L | 10 | 262.87 | 2.46 | 257.52 | 1.09 |
| L | 20 | 263.14 | 1.94 | 254.53 | 1.66 |
| L | 30 | 268.52 | 2.89 | 250.72 | 1.92 |
| L | 40 | 265.78 | 1.99 | 244.68 | 1.08 |
| L | 50 | 266.67 | 1.54 | 241.76 | 1.88 |
| L | 60 | 264.85 | 1.90 | 240.23 | 1.49 |
| L | 70 | 251.96 | 2.05 | 237.46 | 0.77 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 14.0 | 12.03 | 10.84 | 10.32 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.0 | 27.0 | 26.0 | 25.1 | 24.8 | 24.0 |

Date: 7/22/81

Time: 0822-0843

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 279.60 | 1.02 | 278.24 | — |
| X | 20 | 277.92 | — | 276.05 | — |
| X | 30 | 278.38 | — | 275.38 | 0.12 |
| X | 40 | 278.10 | — | 274.77 | 0.58 |
| X | 50 | 277.64 | — | 273.32 | — |
| X | 60 | 276.33 | 0.66 | 272.31 | 0.53 |
| X | 70 | 272.48 | 0.52 | 267.63 | — |
| C | 10 | 274.59 | 0.10 | 275.44 | 0.93 |
| C | 20 | 275.38 | — | 274.57 | — |
| C | 30 | 277.34 | 0.41 | 274.18 | — |
| C | 40 | 278.80 | 0.51 | 274.11 | 0.69 |
| C | 50 | 280.23 | 0.79 | 273.79 | 0.86 |
| C | 60 | 279.54 | 0.92 | 271.67 | 0.56 |
| C | 70 | 275.88 | — | 268.12 | — |
| L | 10 | 269.94 | 0.97 | 266.49 | 1.49 |
| L | 20 | 268.47 | 1.22 | 262.52 | 1.43 |
| L | 30 | 272.74 | 2.24 | 258.56 | 1.24 |
| L | 40 | 268.97 | 1.80 | 254.11 | 1.14 |
| L | 50 | 266.40 | 1.89 | 248.96 | 0.66 |
| L | 60 | 263.81 | 2.13 | 243.88 | 0.56 |
| L | 70 | 254.65 | 2.19 | 241.82 | 1.20 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 8.72 | 8.20 | 8.32 | 7.55 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.5 | 23.5 | 22.3 | 23.2 | 23.9 | 23.0 |

Date: 7/23/81

Time: 1101-1125

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 287.31 | 0.70 | 287.26 | 0.62 |
| X | 20 | 286.87 | 0.86 | 285.98 | 0.22 |
| X | 30 | 285.69 | 0.97 | 283.62 | 0.68 |
| X | 40 | 284.76 | 0.95 | 283.08 | — |
| X | 50 | 282.68 | 0.69 | 279.88 | 0.10 |
| X | 60 | 280.05 | 0.70 | 275.66 | 0.75 |
| X | 70 | 274.46 | 0.57 | 268.54 | — |
| C | 10 | 285.88 | — | 287.06 | 0.59 |
| C | 20 | 286.00 | 0.65 | 286.61 | — |
| C | 30 | 286.87 | — | 286.03 | 0.31 |
| C | 40 | 287.15 | 1.03 | 285.07 | 0.61 |
| C | 50 | 286.75 | 0.50 | 283.31 | — |
| C | 60 | 285.00 | 0.77 | 280.88 | 0.80 |
| C | 70 | 280.17 | 0.97 | 275.71 | — |
| L | 10 | 282.13 | 2.03 | 279.39 | 1.12 |
| L | 20 | 282.63 | 2.02 | 277.29 | 1.35 |
| L | 30 | 281.83 | 1.63 | 274.49 | 1.28 |
| L | 40 | 279.82 | 1.68 | 271.14 | 0.75 |
| L | 50 | 275.27 | 1.64 | 264.81 | 1.50 |
| L | 60 | 270.41 | 1.50 | 262.30 | 1.41 |
| L | 70 | 259.94 | 1.54 | 258.61 | 1.22 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 7.41 | 8.08 | 8.94 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.6 | 29.6 | 31.2 | 29.2 | 25.9 | 23.1 |

Date: 8/3/81

Time: 0920-0945

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 282.52 | — | 282.39 | — |
| X | 20 | 283.37 | 0.48 | 282.30 | — |
| X | 30 | 282.66 | 1.17 | 278.33 | 0.73 |
| X | 40 | 284.26 | 0.89 | 275.13 | 0.93 |
| X | 50 | 286.46 | 0.37 | 271.85 | 0.72 |
| X | 60 | 283.69 | 0.70 | 264.76 | — |
| X | 70 | 278.50 | 0.42 | 255.18 | — |
| C | 10 | 283.66 | — | 284.04 | 0.47 |
| C | 20 | 284.70 | 0.78 | 283.41 | — |
| C | 30 | 286.39 | — | 280.43 | — |
| C | 40 | 289.06 | — | 275.22 | 0.71 |
| C | 50 | 290.54 | 0.72 | 268.72 | 0.22 |
| C | 60 | 290.07 | 0.37 | 259.06 | 0.91 |
| C | 70 | 282.97 | — | 242.23 | — |
| L | 10 | 278.70 | 2.24 | 276.61 | 1.48 |
| L | 20 | 279.94 | 1.99 | 275.58 | 1.55 |
| L | 30 | 281.34 | 1.79 | 271.37 | 1.21 |
| L | 40 | 279.20 | 1.91 | 264.20 | 1.41 |
| L | 50 | 275.31 | 1.67 | 254.63 | 0.77 |
| L | 60 | 267.11 | 2.12 | 234.23 | 1.56 |
| L | 70 | 253.74 | 4.78 | 200.88 | 1.50 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 2.10 | 5.23 | 6.59 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.1 | 25.9 | 23.3 | 23.1 | 24.1 | 23.3 |

Date: 8/4/81

Time: 0810-0835

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 276.23 | — | 273.37 | — |
| X | 20 | 273.87 | 0.74 | 268.98 | 0.33 |
| X | 30 | 275.60 | 0.64 | 267.51 | 0.49 |
| X | 40 | 275.74 | 0.73 | 263.96 | — |
| X | 50 | 273.69 | 0.84 | 250.86 | 0.57 |
| X | 60 | 278.31 | 0.64 | 263.07 | — |
| X | 70 | 273.80 | 1.09 | 252.90 | — |
| C | 10 | 248.94 | 0.52 | 247.50 | — |
| C | 20 | 249.62 | — | 243.86 | 0.31 |
| C | 30 | 253.63 | — | 239.59 | — |
| C | 40 | 259.86 | — | 234.16 | — |
| C | 50 | 267.14 | 0.32 | 228.43 | — |
| C | 60 | 272.17 | — | 223.41 | 0.82 |
| C | 70 | 269.77 | 0.84 | 216.94 | 0.48 |
| L | 10 | 242.29 | 1.73 | 236.79 | 1.21 |
| L | 20 | 239.37 | 1.97 | 227.44 | 1.13 |
| L | 30 | 241.90 | 1.50 | 218.50 | 1.07 |
| L | 40 | 244.53 | 1.75 | 207.86 | 1.18 |
| L | 50 | 248.09 | 1.21 | 190.52 | 0.91 |
| L | 60 | 251.65 | 1.71 | 171.80 | 0.97 |
| L | 70 | 243.38 | 1.78 | 140.20 | 1.02 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 15.66 | 12.54 | 9.55 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.1 | 25.1 | 22.6 | 22.4 | 23.6 | 22.4 |

Date: 8/5/81

Time: 0800-0835

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 271.74 | 0.95 | 261.93 | 0.65 |
| X | 20 | 278.08 | 0.13 | 273.97 | 0.75 |
| X | 30 | 278.94 | 0.77 | 271.55 | 0.32 |
| X | 40 | 280.86 | 1.00 | 269.52 | 0.79 |
| X | 50 | 282.07 | 0.85 | 268.66 | 0.93 |
| X | 60 | 280.77 | 0.65 | 262.09 | — |
| X | 70 | 277.23 | 0.51 | 260.80 | 0.80 |
| C | 10 | 267.77 | 0.82 | 267.06 | — |
| C | 20 | 268.20 | 0.97 | 264.13 | — |
| C | 30 | 271.10 | — | 260.34 | 0.35 |
| C | 40 | 275.12 | 0.23 | 254.55 | — |
| C | 50 | 279.62 | 0.68 | 247.39 | 0.66 |
| C | 60 | 281.55 | — | 238.72 | — |
| C | 70 | 277.25 | — | 230.17 | 0.68 |
| L | 10 | 260.47 | 1.57 | 256.25 | 0.82 |
| L | 20 | 257.37 | 1.87 | 250.06 | 1.52 |
| L | 30 | 259.46 | 1.72 | 241.65 | 1.13 |
| L | 40 | 261.51 | 1.80 | 231.12 | 1.59 |
| L | 50 | 261.85 | 1.92 | 216.13 | 1.30 |
| L | 60 | 261.55 | 2.07 | 193.33 | 1.10 |
| L | 70 | 248.30 | 1.57 | 160.16 | 1.15 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 9.21 | 9.13 | 8.64 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.8 | 24.3 | 23.0 | 22.7 | 24.0 | 23.0 |

Date: 8/26/81

Time: 0847-0915

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 279.83 | 0.83 | 278.79 | 0.44 |
| X | 20 | 278.71 | 1.00 | 277.16 | 0.52 |
| X | 30 | 278.59 | 0.97 | 275.75 | 0.44 |
| X | 40 | 277.69 | 0.78 | 274.05 | 0.48 |
| X | 50 | 275.97 | 0.86 | 270.98 | 0.48 |
| X | 60 | 273.01 | 0.81 | 266.23 | 0.51 |
| X | 70 | 269.53 | 0.68 | 260.04 | 0.45 |
| C | 10 | 279.00 | 0.46 | 280.32 | 0.29 |
| C | 20 | 279.32 | 0.41 | 278.71 | 0.41 |
| C | 30 | 279.49 | 0.80 | 277.16 | 0.32 |
| C | 40 | 280.70 | 0.35 | 275.58 | 0.36 |
| C | 50 | 280.64 | 0.27 | 273.04 | 0.27 |
| C | 60 | 278.75 | 0.94 | 270.24 | 0.29 |
| C | 70 | 275.89 | 0.27 | 267.18 | 0.29 |
| L | 10 | 286.30 | 1.51 | 283.68 | 1.23 |
| L | 20 | 284.45 | 1.59 | 280.21 | 1.46 |
| L | 30 | 282.64 | 1.90 | 276.08 | 1.26 |
| L | 40 | 278.47 | 1.71 | 271.11 | 1.42 |
| L | 50 | 282.99 | 8.16 | 266.66 | 1.19 |
| L | 60 | 270.39 | 1.69 | 257.92 | 1.07 |
| L | 70 | 259.22 | 2.08 | 248.98 | 1.50 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 3.15 | 4.18 | 4.58 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 20.0 | 21.0 | 18.5 | 18.2 | 19.3 | 18.8 |

Date: 8/27/81

Time: 0842-0903

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.42 | 0.94 | 279.47 | 0.53 |
| X | 20 | 278.54 | 0.94 | 277.26 | 0.49 |
| X | 30 | 278.81 | 0.98 | 276.29 | 0.42 |
| X | 40 | 278.13 | 0.86 | 274.47 | 0.42 |
| X | 50 | 277.01 | 0.85 | 271.87 | 0.51 |
| X | 60 | 273.42 | 0.94 | 266.48 | 0.46 |
| X | 70 | 269.27 | 0.96 | 259.95 | 0.45 |
| C | 10 | 280.14 | 0.29 | 280.67 | 0.28 |
| C | 20 | 280.16 | 0.40 | 279.92 | 0.25 |
| C | 30 | 280.76 | 0.43 | 278.80 | 0.33 |
| C | 40 | 281.47 | 0.43 | 277.05 | 0.27 |
| C | 50 | 281.75 | 0.23 | 275.15 | 0.31 |
| C | 60 | 280.53 | 0.35 | 272.39 | 0.37 |
| C | 70 | 276.88 | 0.33 | 267.97 | 0.21 |
| L | 10 | 286.30 | 1.78 | 284.63 | 1.37 |
| L | 20 | 284.06 | 1.64 | 280.69 | 1.23 |
| L | 30 | 283.23 | 1.78 | 277.60 | 1.40 |
| L | 40 | 279.33 | 1.95 | 273.36 | 1.54 |
| L | 50 | 276.92 | 1.89 | 268.45 | 1.59 |
| L | 60 | 271.66 | 3.18 | 261.28 | 1.56 |
| L | 70 | 258.04 | 2.28 | 251.98 | 1.41 |
| P | 10 | 261.89 | 1.69 | 260.82 | 1.96 |
| P | 20 | 264.63 | 1.62 | 260.39 | 1.84 |
| P | 30 | 266.35 | 2.18 | 258.50 | 1.22 |
| P | 40 | 267.08 | 2.34 | 258.13 | 3.30 |
| P | 50 | 267.91 | 1.58 | 248.48 | 1.94 |
| P | 60 | 266.89 | 1.93 | 233.89 | 1.64 |
| P | 70 | 265.33 | 2.56 | 213.81 | 2.01 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 2.76 | 3.18 | 4.17 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.0 | 21.0 | 20.8 | 19.7 | 20.5 | 20.6 |

* P-Band measurements made during 1454-1505 p.m.

Date: 8/28/81

Time: 0853-0913

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 282.82 | 1.05 | 282.01 | 0.50 |
| X | 20 | 281.66 | 0.87 | 280.36 | 0.45 |
| X | 30 | 280.48 | 0.80 | 277.74 | 0.56 |
| X | 40 | 278.92 | 0.89 | 274.94 | 0.46 |
| X | 50 | 276.73 | 0.76 | 271.49 | 0.51 |
| X | 60 | 274.76 | 0.73 | 267.55 | 0.48 |
| X | 70 | 270.76 | 0.71 | 261.91 | 0.45 |
| C | 10 | 281.97 | 0.56 | 283.18 | 0.37 |
| C | 20 | 282.29 | 0.37 | 282.08 | 0.30 |
| C | 30 | 282.67 | 0.34 | 280.28 | 0.31 |
| C | 40 | 283.55 | 0.24 | 278.65 | 0.23 |
| C | 50 | 283.38 | 0.60 | 277.05 | 0.38 |
| C | 60 | 282.11 | 1.02 | 274.30 | 0.26 |
| C | 70 | 279.23 | 0.35 | 271.57 | 0.29 |
| L | 10 | 285.85 | 1.53 | 284.75 | 1.10 |
| L | 20 | 286.63 | 2.16 | 282.30 | 1.43 |
| L | 30 | 284.31 | 1.46 | 279.58 | 1.24 |
| L | 40 | 281.84 | 1.57 | 276.28 | 1.25 |
| L | 50 | 276.99 | 1.55 | 271.18 | 1.20 |
| L | 60 | 270.92 | 1.93 | 262.48 | 1.32 |
| L | 70 | 258.87 | 1.90 | 253.84 | 1.41 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 3.10 | 3.94 | 5.02 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.5 | 22.8 | 20.9 | 19.4 | 19.5 | 20.4 |

Date: 9/1/81

Time: 0947-1009

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 277.47 | 0.77 | 276.52 | 0.44 |
| X | 20 | 275.14 | 0.87 | 273.11 | 0.42 |
| X | 30 | 277.31 | 0.81 | 274.53 | 0.44 |
| X | 40 | 276.47 | 0.75 | 272.31 | 0.40 |
| X | 50 | 276.00 | 1.02 | 269.89 | 0.41 |
| X | 60 | 275.19 | 0.94 | 266.69 | 0.49 |
| X | 70 | 272.17 | 0.95 | 259.39 | 0.55 |
| C | 10 | 272.60 | 0.80 | 272.79 | 0.27 |
| C | 20 | 269.68 | 0.56 | 266.82 | 0.33 |
| C | 30 | 272.10 | 0.29 | 266.86 | 0.34 |
| C | 40 | 276.22 | 0.41 | 267.74 | 0.30 |
| C | 50 | 278.39 | 0.43 | 268.28 | 0.29 |
| C | 60 | 278.73 | 0.42 | 269.53 | 0.31 |
| C | 70 | 275.49 | 0.21 | 268.77 | 0.42 |
| L | 10 | 252.31 | 1.53 | 247.59 | 1.76 |
| L | 20 | 251.13 | 1.47 | 241.99 | 1.10 |
| L | 30 | 252.49 | 1.61 | 236.45 | 1.39 |
| L | 40 | 255.04 | 1.54 | 233.07 | 1.15 |
| L | 50 | 256.95 | 1.83 | 229.73 | 1.06 |
| L | 60 | 257.82 | 1.84 | 226.87 | 2.08 |
| L | 70 | 251.45 | 2.02 | 223.52 | 1.19 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 14.32 | 12.78 | 11.66 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.0 | 21.8 | 21.9 | 21.7 | 23.0 | 22.0 |

Date: 9/2/81

Time: 0841-0906

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 276.51 | 0.91 | 275.34 | 0.52 |
| X | 20 | 276.94 | 0.88 | 275.89 | 0.55 |
| X | 30 | 277.58 | 1.11 | 274.93 | 0.40 |
| X | 40 | 277.64 | 0.89 | 272.84 | 0.45 |
| X | 50 | 277.16 | 0.83 | 270.13 | 0.55 |
| X | 60 | 276.53 | 0.86 | 267.50 | 0.32 |
| X | 70 | 273.58 | 0.68 | 262.08 | 0.43 |
| C | 10 | 273.35 | 0.33 | 273.17 | 0.29 |
| C | 20 | 273.88 | 0.32 | 271.98 | 0.29 |
| C | 30 | 275.77 | 0.26 | 271.21 | 0.34 |
| C | 40 | 277.65 | 0.76 | 272.17 | 0.41 |
| C | 50 | 278.79 | 0.46 | 272.61 | 0.35 |
| C | 60 | 278.23 | 0.31 | 272.20 | 0.28 |
| C | 70 | 274.53 | 0.27 | 270.20 | 0.27 |
| L | 10 | 259.59 | 1.67 | 255.84 | 1.59 |
| L | 20 | 257.29 | 1.55 | 249.94 | 1.27 |
| L | 30 | 258.70 | 1.63 | 245.07 | 1.35 |
| L | 40 | 260.99 | 2.11 | 243.28 | 1.18 |
| L | 50 | 260.87 | 1.19 | 238.23 | 1.32 |
| L | 60 | 261.33 | 1.57 | 234.42 | 1.39 |
| L | 70 | 252.01 | 1.47 | 229.36 | 1.18 |
| P | 10 | 243.48 | 1.40 | 244.69 | 1.55 |
| P | 20 | 249.12 | 2.84 | 243.19 | 1.71 |
| P | 30 | 247.67 | 2.05 | 236.77 | 1.72 |
| P | 40 | 251.30 | 1.96 | 232.69 | 1.72 |
| P | 50 | 253.82 | 2.52 | 225.86 | 1.69 |
| P | 60 | 252.86 | 1.62 | 219.97 | 1.59 |
| P | 70 | 248.15 | 1.53 | 209.78 | 1.84 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 12.56 | 11.11 | 10.52 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.6 | 21.8 | 20.7 | 21.2 | 22.5 | 22.2 |

* P-Band measurements made during 1450-1503 p.m.

Date: 9/3/81

Time: 0845-0901

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 278.37 | 0.85 | 277.79 | 0.41 |
| X | 20 | 278.27 | 0.92 | 276.32 | 0.47 |
| X | 30 | 278.88 | 0.89 | 276.37 | 0.45 |
| X | 40 | 279.31 | 0.86 | 274.93 | 0.51 |
| X | 50 | 278.58 | 0.98 | 271.86 | 0.51 |
| X | 60 | 277.12 | 0.94 | 268.28 | 0.45 |
| X | 70 | 274.11 | 0.80 | 264.79 | 0.43 |
| C | 10 | 276.17 | 0.51 | 276.35 | 0.34 |
| C | 20 | 277.08 | 0.33 | 275.77 | 0.37 |
| C | 30 | 278.94 | 0.33 | 275.45 | 0.24 |
| C | 40 | 280.77 | 0.32 | 275.98 | 0.25 |
| C | 50 | 281.43 | 0.72 | 275.79 | 0.26 |
| C | 60 | 280.72 | 0.30 | 275.47 | 0.32 |
| C | 70 | 277.30 | 0.32 | 273.84 | 0.36 |
| L | 10 | 261.50 | 1.92 | 257.46 | 1.13 |
| L | 20 | 262.25 | 1.75 | 255.22 | 1.14 |
| L | 30 | 262.94 | 1.75 | 250.68 | 1.25 |
| L | 40 | 264.75 | 1.49 | 248.26 | 1.42 |
| L | 50 | 265.15 | 1.46 | 243.46 | 1.01 |
| L | 60 | 263.42 | 1.84 | 236.25 | 1.22 |
| L | 70 | 255.43 | 2.03 | 232.90 | 0.97 |
| P | 10 | 248.26 | 1.57 | 249.43 | 2.04 |
| P | 20 | 249.50 | 1.95 | 246.69 | 2.04 |
| P | 30 | 252.75 | 2.42 | 242.39 | 1.44 |
| P | 40 | 255.28 | 2.59 | 238.63 | 1.41 |
| P | 50 | 257.24 | 2.66 | 229.38 | 2.40 |
| P | 60 | 255.81 | 1.75 | 224.37 | 1.85 |
| P | 70 | 244.31 | 1.97 | 214.31 | 1.86 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 10.65 | 9.66 | 9.63 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.3 | 20.5 | 20.8 | 22.0 | 22.8 | 23.0 |

* P-Band measurements made during 1407-1422 p.m.

Date: 9/4/81

Time: 0914-

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.17 | 0.95 | 279.74 | 0.45 |
| X | 20 | 279.51 | 0.90 | 278.08 | 0.50 |
| X | 30 | 280.11 | 0.90 | 277.63 | 0.45 |
| X | 40 | 279.47 | 0.91 | 275.62 | 0.44 |
| X | 50 | 277.87 | 1.03 | 272.22 | 0.49 |
| X | 60 | 276.41 | 0.75 | 269.38 | 0.53 |
| X | 70 | 272.93 | 0.81 | 262.67 | 0.39 |
| C | 10 | 276.43 | 0.24 | 276.34 | 0.28 |
| C | 20 | 276.92 | 0.39 | 275.41 | 0.29 |
| C | 30 | 279.11 | 0.90 | 275.71 | 0.31 |
| C | 40 | 280.57 | 0.94 | 275.51 | 0.26 |
| C | 50 | 281.55 | 0.39 | 275.32 | 0.37 |
| C | 60 | 280.42 | 0.22 | 274.51 | 0.25 |
| C | 70 | 275.92 | 0.28 | 273.02 | 0.25 |
| L | 10 | 262.36 | 1.75 | 255.72 | 1.29 |
| L | 20 | 264.78 | 1.97 | 258.71 | 1.07 |
| L | 30 | 265.21 | 1.96 | 252.82 | 1.27 |
| L | 40 | 266.13 | 1.53 | 250.27 | 1.11 |
| L | 50 | 266.56 | 1.95 | 244.91 | 1.27 |
| L | 60 | 264.85 | 1.37 | 238.64 | 1.11 |
| L | 70 | 254.24 | 1.57 | 233.53 | 1.01 |
| P | 10 | 249.34 | 2.17 | 251.01 | 1.92 |
| P | 20 | 251.30 | 1.81 | 250.53 | 1.63 |
| P | 30 | 251.73 | 1.86 | 244.18 | 1.53 |
| P | 40 | 253.13 | 1.91 | 238.53 | 1.96 |
| P | 50 | 255.49 | 1.58 | 230.29 | 1.72 |
| P | 60 | 252.59 | 2.04 | 228.58 | 1.39 |
| P | 70 | 244.12 | 1.97 | 214.50 | 2.03 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 8.69 | 8.58 | 8.61 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 21.6 | 21.0 | 20.6 | 20.6 | 22.0 | 20.9 |

* P-Band measurements made during 1045-1107 a.m.

Date: 9/11/81

Time: 0902-0925

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 278.46 | 0.90 | 279.12 | 0.41 |
| X | 20 | 278.31 | 0.77 | 277.77 | 0.61 |
| X | 30 | 278.17 | 0.95 | 276.61 | 0.38 |
| X | 40 | 275.94 | 0.81 | 273.36 | 0.57 |
| X | 50 | 273.21 | 0.86 | 268.05 | 0.49 |
| X | 60 | 269.85 | 1.09 | 264.06 | 0.47 |
| X | 70 | 267.00 | 0.80 | 259.42 | 0.42 |
| C | 10 | 280.53 | 0.39 | 282.11 | 0.20 |
| C | 20 | 281.02 | 0.66 | 281.67 | 0.25 |
| C | 30 | 281.46 | 0.70 | 281.00 | 0.35 |
| C | 40 | 280.67 | 0.46 | 279.16 | 0.34 |
| C | 50 | 280.53 | 0.68 | 278.54 | 0.34 |
| C | 60 | 279.51 | 0.70 | 277.03 | 0.33 |
| C | 70 | 276.36 | 0.24 | 273.78 | 0.30 |
| L | 10 | 276.28 | 1.42 | 274.68 | 1.31 |
| L | 20 | 274.87 | 1.77 | 270.99 | 1.02 |
| L | 30 | 276.96 | 2.49 | 267.87 | 1.35 |
| L | 40 | 273.85 | 1.89 | 263.30 | 1.46 |
| L | 50 | 270.72 | 1.80 | 259.01 | 1.35 |
| L | 60 | 266.87 | 1.91 | 257.62 | 1.29 |
| L | 70 | 256.55 | 1.97 | 248.47 | 1.40 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 5.55 | 5.91 | 6.34 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.1 | 20.5 | 17.8 | 16.9 | 18.0 | 17.7 |

Date: 9/14/81

Time: 0852-0919

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.13 | 0.87 | 280.03 | 0.41 |
| X | 20 | 279.83 | 1.02 | 278.97 | 0.53 |
| X | 30 | 277.99 | 0.76 | 275.67 | 0.44 |
| X | 40 | 277.15 | 0.85 | 274.00 | 0.51 |
| X | 50 | 277.28 | 1.01 | 272.96 | 0.41 |
| X | 60 | 275.30 | 0.97 | 269.01 | 0.53 |
| X | 70 | 271.20 | 0.85 | 263.36 | 0.44 |
| C | 10 | 283.19 | 0.45 | 284.42 | 0.37 |
| C | 20 | 283.29 | 0.50 | 283.98 | 0.31 |
| C | 30 | 284.28 | 0.23 | 283.13 | 0.30 |
| C | 40 | 284.22 | 0.78 | 282.53 | 0.36 |
| C | 50 | 283.29 | 1.08 | 281.24 | 0.27 |
| C | 60 | 281.92 | 0.33 | 279.25 | 0.25 |
| C | 70 | 277.83 | 0.24 | 275.42 | 0.29 |
| L | 10 | 282.75 | 1.85 | 281.02 | 1.31 |
| L | 20 | 282.06 | 1.40 | 278.03 | 1.34 |
| L | 30 | 280.81 | 1.53 | 275.79 | 1.36 |
| L | 40 | 278.19 | 1.61 | 271.53 | 1.03 |
| L | 50 | 275.70 | 1.69 | 268.77 | 1.27 |
| L | 60 | 270.35 | 1.86 | 263.79 | 1.50 |
| L | 70 | 259.32 | 1.53 | 256.00 | 1.36 |
| P | 10 | 256.73 | 2.01 | 253.86 | 1.88 * |
| P | 20 | 257.67 | 2.07 | 252.29 | 1.85 |
| P | 30 | 257.91 | 2.52 | 250.39 | 2.08 |
| P | 40 | 261.62 | 2.13 | 248.13 | 2.42 |
| P | 50 | 262.37 | 2.23 | 246.98 | 2.21 |
| P | 60 | 259.66 | 2.30 | 241.75 | 1.93 |
| P | 70 | 251.00 | 2.10 | 243.89 | 1.93 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 3.48 | 4.67 | 4.85 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.4 | 20.3 | 19.9 | 18.5 | 20.0 | 18.7 |

* P-Band measurements made during 1430-1447 p.m.

Date: 9/15/81

Time: 0937-0952

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | | | | |
| X | 20 | | | | |
| X | 30 | | | | |
| X | 40 | | | | |
| X | 50 | | | | |
| X | 60 | | | | |
| X | 70 | | | | |
| C | 10 | | | | |
| C | 20 | | | | |
| C | 30 | | | | |
| C | 40 | | | | |
| C | 50 | | | | |
| C | 60 | | | | |
| C | 70 | | | | |
| L | 10 | | | | |
| L | 20 | | | | |
| L | 30 | | | | |
| L | 40 | | | | |
| L | 50 | | | | |
| L | 60 | | | | |
| L | 70 | | | | |
| P | 10 | 259.17 | 2.09 | 258.63 | 1.65 |
| P | 20 | 258.77 | 1.82 | 256.93 | 1.68 |
| P | 30 | 258.96 | 2.09 | 252.42 | 1.70 |
| P | 40 | 264.20 | 1.80 | 255.19 | 2.15 |
| P | 50 | 260.63 | 2.15 | 246.34 | 1.66 |
| P | 60 | 258.42 | 2.82 | 242.69 | 3.17 |
| P | 70 | 251.57 | 1.71 | 243.28 | 1.82 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 3.47 | 3.74 | 4.07 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.0 | 21.0 | 20.8 | 20.5 | 21.5 | 20.2 |

Date: 9/17/81

Time: 1101-1134

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 279.29 | 0.91 | 278.78 | 0.53 |
| X | 20 | 281.18 | 0.73 | 280.23 | 0.59 |
| X | 30 | 280.84 | 1.14 | 279.53 | 0.40 |
| X | 40 | 278.14 | 0.86 | 275.66 | 0.40 |
| X | 50 | 277.40 | 0.90 | 274.10 | 0.44 |
| X | 60 | 275.38 | 0.92 | 269.60 | 0.48 |
| X | 70 | 272.12 | 0.85 | 265.16 | 0.56 |
| C | 10 | 278.46 | 0.48 | 279.63 | 0.28 |
| C | 20 | 279.64 | 0.35 | 280.26 | 0.38 |
| C | 30 | 280.85 | 0.91 | 279.89 | 0.35 |
| C | 40 | 280.25 | 0.36 | 278.26 | 0.37 |
| C | 50 | 280.19 | 0.43 | 277.96 | 0.29 |
| C | 60 | 278.94 | 0.83 | 277.06 | 0.39 |
| C | 70 | 275.59 | 0.71 | 273.97 | 0.35 |
| L | 10 | 250.81 | 1.51 | 246.29 | 1.30 |
| L | 20 | 251.83 | 2.07 | 246.12 | 1.44 |
| L | 30 | 257.33 | 1.38 | 244.77 | 1.16 |
| L | 40 | 257.50 | 2.20 | 242.71 | 1.24 |
| L | 50 | 257.08 | 1.87 | 241.30 | 1.63 |
| L | 60 | 257.75 | 1.35 | 240.16 | 1.22 |
| L | 70 | 250.24 | 1.73 | 239.35 | 1.18 |
| P | 10 | 231.54 | 2.00 | 233.97 | 2.41 * |
| P | 20 | 236.97 | 2.48 | 228.15 | 1.95 |
| P | 30 | 240.79 | 2.43 | 231.30 | 1.68 |
| P | 40 | 244.95 | 1.93 | 223.17 | 2.55 |
| P | 50 | 248.02 | 1.97 | 224.21 | 1.92 |
| P | 60 | 246.43 | 2.37 | 217.73 | 2.10 |
| P | 70 | 235.22 | 1.96 | 215.86 | 1.97 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 16.28 | 15.69 | 15.54 |
| | 16.83 | 15.82 | 14.64 * |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 21.2 | 22.0 | 21.1 | 19.9 | 21.0 | 20.2 |
| 19.0 | 19.0 | 19.3 | 19.1 | 20.5 | 19.6 * |

* P-Band measurements made during 0937-1004 a.m.

Date: 9/18/81

Time: 1134-1149

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 274.96 | 0.87 | 274.83 | 0.44 |
| X | 20 | 275.07 | 0.75 | 274.45 | 0.48 |
| X | 30 | 275.68 | 0.60 | 273.85 | 0.51 |
| X | 40 | 275.25 | 0.82 | 273.57 | 0.46 |
| X | 50 | 274.41 | 0.52 | 272.06 | 0.45 |
| X | 60 | 272.10 | 0.85 | 269.23 | 0.45 |
| X | 70 | 268.03 | 0.88 | 264.42 | 0.37 |
| C | 10 | 274.92 | 0.34 | 276.00 | 0.27 |
| C | 20 | 275.64 | 0.23 | 275.70 | 0.30 |
| C | 30 | 277.01 | 0.26 | 276.10 | 0.28 |
| C | 40 | 278.86 | 0.54 | 277.81 | 0.31 |
| C | 50 | 280.65 | 0.36 | 278.86 | 0.32 |
| C | 60 | 281.78 | 0.62 | 280.53 | 0.32 |
| C | 70 | 281.46 | 0.51 | 280.57 | 0.36 |
| L | 10 | 250.86 | 1.71 | 245.20 | 1.35 |
| L | 20 | 250.92 | 2.18 | 242.65 | 1.30 |
| L | 30 | 251.62 | 1.50 | 240.93 | 1.39 |
| L | 40 | 252.23 | 1.59 | 237.31 | 1.21 |
| L | 50 | — | — | 236.39 | 1.29 |
| L | 60 | 252.94 | 1.80 | 236.49 | 0.94 |
| L | 70 | 245.69 | 1.83 | 237.02 | 1.42 |
| P | 10 | 235.25 | 2.38 | 231.81 | 1.66 * |
| P | 20 | 232.91 | 1.96 | 226.10 | 2.18 |
| P | 30 | 237.43 | 2.07 | 222.21 | 1.90 |
| P | 40 | 244.31 | 1.85 | 222.26 | 2.46 |
| P | 50 | 242.83 | 2.30 | 215.30 | 1.78 |
| P | 60 | 241.92 | 1.85 | 214.47 | 1.41 |
| P | 70 | 229.98 | 2.06 | 211.06 | 2.11 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 17.61 | 18.35 | 17.32 |
| | 17.63 | 16.36 | 18.90 * |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 17.4 | 17.0 | 17.5 | 18.0 | 19.3 | 18.5 |
| 17.2 | 17.0 | 17.4 | 17.9 | 19.0 | 18.5 * |

* P-Band measurements made during 1026-1052 a.m.

Date: 9/28/81

Time: 0859-0917

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 277.77 | 0.94 | 278.12 | 0.44 |
| X | 20 | 277.52 | 0.97 | 277.65 | 0.53 |
| X | 30 | 277.39 | 0.96 | 277.44 | 0.37 |
| X | 40 | 275.80 | 0.82 | 274.44 | 0.54 |
| X | 50 | 274.60 | 0.86 | 271.73 | 0.43 |
| X | 60 | 271.44 | 0.92 | 267.75 | 0.62 |
| X | 70 | 269.09 | 0.67 | 264.40 | 0.39 |
| C | 10 | 275.94 | 0.73 | 276.51 | 0.33 |
| C | 20 | 276.41 | 0.30 | 276.26 | 0.33 |
| C | 30 | 277.12 | 0.31 | 276.57 | 0.32 |
| C | 40 | 277.67 | 0.48 | 276.58 | 0.37 |
| C | 50 | 277.59 | 0.37 | 276.47 | 0.28 |
| C | 60 | 277.14 | 0.77 | 275.71 | 0.28 |
| C | 70 | 275.10 | 0.27 | 273.29 | 0.34 |
| L | 10 | 254.45 | 1.55 | 251.43 | 1.33 |
| L | 20 | 255.94 | 1.21 | 249.38 | 1.50 |
| L | 30 | 255.99 | 1.80 | 246.56 | 2.31 |
| L | 40 | 256.05 | 1.48 | 242.53 | 1.28 |
| L | 50 | 255.84 | 1.78 | 239.62 | 1.73 |
| L | 60 | 255.61 | 1.61 | 239.85 | 1.56 |
| L | 70 | 249.01 | 1.33 | 236.38 | 1.24 |
| P | 10 | 246.60 | 3.10 | 245.92 | 2.28 |
| P | 20 | 247.80 | 2.25 | 242.43 | 2.21 |
| P | 30 | 251.29 | 2.72 | 238.99 | 1.79 |
| P | 40 | 257.67 | 3.13 | 237.64 | 2.63 |
| P | 50 | 256.81 | 3.61 | 231.49 | 1.98 |
| P | 60 | 255.53 | 2.71 | 226.42 | 2.47 |
| P | 70 | 254.84 | 2.96 | 230.77 | 2.37 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 11.00 | 10.80 | 10.51 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 18.4 | 15.0 | 15.5 | 15.2 | 16.5 | 16.0 |

* P-Band measurements made during 1155 a.m.-1210 p.m.

Date: 9/29/81

Time: 0907-0924

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 270.52 | 0.81 | 272.16 | 0.42 |
| X | 20 | 270.76 | 0.79 | 271.65 | 0.44 |
| X | 30 | 269.92 | 0.76 | 270.39 | 0.41 |
| X | 40 | 269.25 | 0.82 | 269.56 | 0.44 |
| X | 50 | 268.10 | 0.94 | 267.56 | 0.45 |
| X | 60 | 265.93 | 0.78 | 264.61 | 0.42 |
| X | 70 | 264.13 | 0.86 | 261.31 | 0.53 |
| C | 10 | 270.65 | 0.30 | 272.07 | 0.33 |
| C | 20 | 270.96 | 0.54 | 272.01 | 0.35 |
| C | 30 | 271.46 | 0.47 | 271.57 | 0.38 |
| C | 40 | 271.56 | 0.42 | 271.30 | 0.36 |
| C | 50 | 270.99 | 0.58 | 270.50 | 0.37 |
| C | 60 | 270.07 | 0.78 | 269.29 | 0.28 |
| C | 70 | 267.74 | 0.30 | 266.13 | 0.27 |
| L | 10 | 257.18 | 1.50 | 254.91 | 1.15 |
| L | 20 | 256.60 | 1.46 | 250.91 | 1.26 |
| L | 30 | 257.55 | 1.93 | 247.83 | 1.15 |
| L | 40 | 255.34 | 1.65 | 244.00 | 1.05 |
| L | 50 | 253.55 | 1.87 | 241.06 | 1.33 |
| L | 60 | 251.48 | 1.77 | 239.86 | 1.22 |
| L | 70 | 244.36 | 1.45 | 237.21 | 0.86 |
| P | 10 | 245.20 | 2.30 | 246.34 | 2.72 * |
| P | 20 | 245.90 | 2.77 | 243.14 | 2.00 |
| P | 30 | 249.48 | 2.55 | 239.50 | 2.76 |
| P | 40 | 252.65 | 2.60 | 240.85 | 2.47 |
| P | 50 | 252.64 | 2.11 | 231.84 | 2.61 |
| P | 60 | 252.91 | 2.63 | 231.62 | 2.32 |
| P | 70 | 247.84 | 2.67 | 231.23 | 2.36 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 10.83 | 9.75 | 9.82 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 12.8 | 12.0 | 11.7 | 11.9 | 13.5 | 13.9 |
| 16.2 | 17.0 | 20.7 | 16.0 | 15.5 | 15.8 * |

* P-Band measurements made during 1137 a.m.-1209 p.m.

Date: 9/30/81

Time: 1102-1118

Plot No.: 111

Field: Alfalfa

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 274.05 | 0.86 | 276.70 | 0.55 |
| X | 20 | 274.46 | 0.86 | 276.35 | 0.51 |
| X | 30 | 273.94 | 0.82 | 274.97 | 0.45 |
| X | 40 | 273.43 | 0.96 | 273.85 | 0.58 |
| X | 50 | 270.79 | 0.78 | 271.76 | 0.45 |
| X | 60 | 268.82 | 0.47 | 268.63 | 0.50 |
| X | 70 | 265.69 | 0.72 | 264.92 | 0.45 |
| C | 10 | 274.65 | 1.00 | 275.79 | 0.34 |
| C | 20 | 274.57 | 0.63 | 275.46 | 0.31 |
| C | 30 | 275.07 | 0.42 | 275.21 | 0.31 |
| C | 40 | 275.04 | 0.56 | 275.01 | 0.38 |
| C | 50 | 274.52 | 0.38 | 274.73 | 0.28 |
| C | 60 | 273.41 | 0.24 | 272.52 | 0.28 |
| C | 70 | 270.16 | 0.35 | 269.84 | 0.27 |
| L | 10 | 258.03 | 1.61 | 254.49 | 1.31 |
| L | 20 | 256.69 | 1.92 | 251.96 | 1.59 |
| L | 30 | 257.42 | 1.82 | 249.75 | 1.58 |
| L | 40 | 256.17 | 1.58 | 245.74 | 1.19 |
| L | 50 | 254.36 | 1.69 | 242.95 | 1.28 |
| L | 60 | 253.45 | 1.77 | 241.84 | 1.22 |
| L | 70 | 245.01 | 2.06 | 239.01 | 1.23 |
| P | 10 | 245.97 | 2.39 | 245.46 | 2.26 * |
| P | 20 | 245.62 | 2.33 | 244.07 | 2.27 |
| P | 30 | 248.99 | 2.62 | 240.65 | 2.74 |
| P | 40 | 251.56 | 2.37 | 239.57 | 2.19 |
| P | 50 | 252.59 | 2.57 | 231.07 | 2.69 |
| P | 60 | 252.61 | 2.86 | 229.83 | 2.61 |
| P | 70 | 247.46 | 2.85 | 227.49 | 2.39 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 9.91 | 9.87 | 9.89 |
| | 9.32 | 9.71 | 9.89 * |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 15.6 | 13.8 | 14.7 | 14.7 | 15.8 | 16.1 |
| 15.8 | 15.0 | 15.8 | 14.7 | 16.0 | 16.1 * |

* P-Band measurements made during 0928-0942 a.m.

Date: 6/24/81

Time: 1147-1211

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 294.25 | 0.76 | 290.76 | 0.29 |
| X | 20 | 294.93 | 1.20 | 290.77 | 0.57 |
| X | 30 | 295.58 | 0.78 | 290.40 | — |
| X | 40 | 294.57 | — | 289.47 | — |
| X | 50 | 291.89 | 0.65 | 285.71 | 0.93 |
| X | 60 | 287.72 | 0.89 | 280.24 | 0.49 |
| X | 70 | 280.14 | 1.12 | 274.52 | 0.74 |
| C | 10 | 293.87 | 0.86 | 296.17 | 0.64 |
| C | 20 | 295.31 | — | 297.20 | 0.91 |
| C | 30 | 297.05 | 0.23 | 297.58 | 0.50 |
| C | 40 | 297.85 | — | 296.75 | — |
| C | 50 | 298.25 | 0.92 | 295.83 | — |
| C | 60 | 295.81 | — | 294.27 | 0.47 |
| C | 70 | 290.38 | 0.40 | 290.54 | — |
| L | 10 | 284.87 | 0.69 | 285.59 | 1.46 |
| L | 20 | 285.01 | 1.90 | 284.14 | 1.36 |
| L | 30 | 284.36 | 1.58 | 281.89 | 1.26 |
| L | 40 | 281.01 | 1.59 | 276.88 | 1.54 |
| L | 50 | 278.87 | 1.40 | 273.29 | 1.50 |
| L | 60 | 273.19 | 1.93 | 266.23 | 1.25 |
| L | 70 | 262.30 | 1.44 | 254.98 | 1.67 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 3.06 | 4.69 | 4.54 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.9 | 34.8 | 30.3 | 27.7 | 25.4 | 24.5 |

Date: 7/13/81

Time: 1104-1126

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 295.18 | 0.64 | 293.83 | 0.46 |
| X | 20 | 295.41 | — | 294.12 | — |
| X | 30 | 296.42 | 0.43 | 294.59 | — |
| X | 40 | 295.24 | 0.23 | 291.84 | 0.76 |
| X | 50 | 294.58 | 0.39 | 289.63 | 0.31 |
| X | 60 | 289.65 | 0.46 | 284.94 | 0.40 |
| X | 70 | 284.41 | 0.35 | 279.96 | 1.04 |
| C | 10 | 294.66 | — | 297.09 | 0.41 |
| C | 20 | 295.63 | 0.56 | 296.30 | — |
| C | 30 | 297.93 | — | 296.48 | — |
| C | 40 | 300.09 | 0.47 | 295.58 | — |
| C | 50 | 301.44 | — | 295.28 | 0.71 |
| C | 60 | 300.44 | 0.35 | 293.21 | 1.02 |
| C | 70 | 294.59 | 0.59 | 288.54 | — |
| L | 10 | 286.68 | 1.59 | 285.49 | 1.24 |
| L | 20 | 285.56 | 1.39 | 281.51 | 1.19 |
| L | 30 | 284.80 | 1.84 | 278.42 | 1.42 |
| L | 40 | 283.04 | 1.34 | 274.73 | 1.60 |
| L | 50 | 280.13 | 0.71 | 269.57 | 1.35 |
| L | 60 | 273.75 | 1.76 | 259.25 | 1.82 |
| L | 70 | 260.68 | 1.32 | 242.98 | 1.46 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 3.52 | 4.50 | 4.98 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 31.6 | 34.5 | 31.4 | 27.7 | 25.5 | 23.4 |

Date: 7/14/81

Time: 0948-1049

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 294.91 | 0.54 | 295.12 | — |
| X | 20 | 294.39 | — | 293.79 | 0.99 |
| X | 30 | 295.22 | 1.05 | 292.82 | 0.93 |
| X | 40 | 295.25 | 0.91 | 291.67 | 0.91 |
| X | 50 | 291.36 | — | 286.53 | — |
| X | 60 | 288.99 | 0.90 | 283.51 | 1.01 |
| X | 70 | 281.59 | 1.15 | 277.55 | 0.81 |
| C | 10 | 294.35 | — | 296.59 | — |
| C | 20 | 294.90 | — | 295.47 | 0.17 |
| C | 30 | 296.77 | — | 295.06 | 0.18 |
| C | 40 | 298.56 | 0.92 | 294.22 | 0.10 |
| C | 50 | 298.11 | — | 292.39 | 1.40 |
| C | 60 | 297.51 | — | 291.12 | — |
| C | 70 | 292.04 | 1.18 | 288.49 | 0.12 |
| L | 10 | 290.42 | 1.49 | 291.18 | 1.16 |
| L | 20 | 289.65 | 1.87 | 286.65 | 1.38 |
| L | 30 | 288.41 | 2.26 | 282.55 | 1.18 |
| L | 40 | 285.68 | 2.03 | 278.17 | 1.27 |
| L | 50 | — | — | — | — |
| L | 60 | 274.42 | 1.76 | 263.13 | 1.38 |
| L | 70 | 263.41 | 1.71 | 258.93 | 1.63 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 2.33 | 2.32 | 1.98 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.8 | 28.8 | 27.0 | 26.9 | 25.6 | 24.3 |

Date: 7/21/81

Time: 1411-1438

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 287.01 | — | 286.24 | 0.22 |
| X | 20 | 284.60 | 0.61 | 282.57 | 0.86 |
| X | 30 | 288.06 | 0.51 | 283.74 | 0.57 |
| X | 40 | 289.06 | 0.32 | 284.21 | 0.48 |
| X | 50 | 287.86 | — | 284.27 | 0.29 |
| X | 60 | 287.81 | 1.01 | 280.12 | 0.68 |
| X | 70 | 281.64 | — | 273.58 | 0.75 |
| C | 10 | 279.18 | 0.34 | 281.71 | — |
| C | 20 | 280.72 | 0.91 | 279.39 | — |
| C | 30 | 284.62 | — | 279.55 | — |
| C | 40 | 289.72 | — | 280.13 | — |
| C | 50 | 292.05 | — | 281.13 | 0.90 |
| C | 60 | 292.90 | 1.00 | 282.15 | — |
| C | 70 | 287.76 | 0.49 | 280.00 | 0.33 |
| L | 10 | 257.80 | 1.87 | 254.14 | 0.76 |
| L | 20 | 256.35 | 1.49 | 248.08 | 1.10 |
| L | 30 | — | — | 245.62 | 0.35 |
| L | 40 | 261.39 | 1.62 | 240.34 | 1.70 |
| L | 50 | 262.56 | 1.52 | 235.19 | 0.89 |
| L | 60 | 262.33 | 2.04 | 233.97 | 1.50 |
| L | 70 | 253.28 | 1.92 | 230.82 | 1.65 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 12.15 | 10.89 | 9.90 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 33.4 | 31.6 | 35.3 | 32.5 | 30.5 | 26.3 |

Date: 7/22/81

Time: 0932-0957

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 282.48 | 0.50 | 283.19 | 0.38 |
| X | 20 | 282.94 | 0.70 | 282.59 | 0.31 |
| X | 30 | 283.52 | 0.57 | 281.10 | 0.83 |
| X | 40 | 283.67 | — | 280.47 | 0.62 |
| X | 50 | 283.01 | 0.90 | 279.07 | 1.04 |
| X | 60 | 280.39 | 0.84 | 276.31 | 0.93 |
| X | 70 | 276.47 | 0.95 | 271.79 | 0.77 |
| C | 10 | 278.71 | — | 280.83 | — |
| C | 20 | 281.54 | — | 280.33 | — |
| C | 30 | 284.68 | 0.75 | 279.75 | 0.28 |
| C | 40 | 287.83 | — | 279.54 | 0.63 |
| C | 50 | 290.38 | — | 280.84 | 1.14 |
| C | 60 | 290.10 | 0.41 | 280.29 | — |
| C | 70 | 285.04 | 0.43 | 277.57 | — |
| L | 10 | 262.36 | 1.78 | 259.53 | 1.26 |
| L | 20 | 263.35 | 1.61 | 257.04 | 1.42 |
| L | 30 | 265.66 | 1.53 | 252.16 | 1.08 |
| L | 40 | 266.15 | 1.76 | 247.29 | 1.44 |
| L | 50 | 266.34 | 1.85 | 241.34 | 0.97 |
| L | 60 | 263.81 | 1.67 | 234.08 | 1.45 |
| L | 70 | 255.96 | 1.26 | 234.00 | 1.45 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 8.72 | 6.78 | 5.97 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.9 | 25.5 | 27.1 | 25.7 | 24.7 | 23.3 |

Date: 7/23/81

Time: 0823-0853

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.35 | — | 277.95 | 1.18 |
| X | 20 | 280.33 | 0.73 | 277.23 | — |
| X | 30 | 280.10 | 0.94 | 277.56 | 1.05 |
| X | 40 | 279.20 | 0.95 | 275.29 | 0.29 |
| X | 50 | 277.83 | 0.75 | 273.15 | — |
| X | 60 | 276.41 | 0.64 | 270.27 | — |
| X | 70 | 272.72 | — | 265.91 | 0.58 |
| C | 10 | 279.36 | — | 280.97 | 0.78 |
| C | 20 | 280.41 | 0.54 | 280.31 | — |
| C | 30 | 282.21 | 0.94 | 279.81 | 0.91 |
| C | 40 | 283.67 | 0.82 | 278.84 | 0.68 |
| C | 50 | 284.67 | — | 278.91 | 0.85 |
| C | 60 | 284.29 | — | 277.66 | 0.48 |
| C | 70 | 280.02 | — | 273.63 | 0.56 |
| L | 10 | 272.00 | 1.43 | 269.00 | 1.49 |
| L | 20 | 271.69 | 1.49 | 265.37 | 1.09 |
| L | 30 | 270.96 | 1.61 | 260.92 | 1.57 |
| L | 40 | 268.92 | 1.54 | 255.45 | 1.32 |
| L | 50 | — | — | 249.12 | 1.96 |
| L | 60 | 262.28 | 1.55 | 240.19 | 0.91 |
| L | 70 | 252.33 | 1.73 | 228.92 | 0.87 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| | | | |
|-----------|-----------|------------|---------|
| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|

| | | | |
|---|---|---|---|
| — | — | — | — |
|---|---|---|---|

Soil Temperature Data (°C)

| | | | | | |
|---------|---------|---------|--------|--------|---------|
| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
| 19.7 | 20.1 | 19.8 | 20.1 | 21.2 | 22.0 |

Date: 8/3/81

Time: 0852-0916

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev (H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 287.94 | 1.04 | 287.91 | 0.74 |
| X | 20 | 285.63 | — | 284.46 | — |
| X | 30 | 285.61 | 0.84 | 282.89 | 1.13 |
| X | 40 | 284.85 | 0.95 | 281.97 | 0.40 |
| X | 50 | 285.28 | 0.48 | 281.02 | 1.01 |
| X | 60 | 282.46 | 0.57 | 278.07 | 0.56 |
| X | 70 | 279.44 | 0.69 | 275.02 | — |
| C | 10 | 287.40 | 0.29 | 288.38 | — |
| C | 20 | 286.56 | 0.64 | 285.59 | 1.98 |
| C | 30 | 288.47 | — | 285.43 | 0.53 |
| C | 40 | 289.26 | 0.63 | 283.92 | — |
| C | 50 | 288.03 | 0.63 | 280.29 | — |
| C | 60 | 288.09 | — | 278.80 | — |
| C | 70 | 284.44 | 0.62 | 275.03 | — |
| L | 10 | 280.50 | 1.73 | 279.63 | 1.19 |
| L | 20 | 282.68 | 1.84 | 278.13 | 1.78 |
| L | 30 | 282.38 | 1.43 | 274.98 | 0.92 |
| L | 40 | 278.93 | 1.83 | 269.63 | 1.28 |
| L | 50 | 274.37 | 1.64 | 261.93 | 1.07 |
| L | 60 | 266.99 | 1.43 | 253.39 | 1.40 |
| L | 70 | 250.98 | 1.75 | 241.25 | 0.28 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 4.21 | 5.19 | 5.31 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.6 | 24.5 | 23.5 | 23.2 | 24.1 | 23.2 |

Date: 8/4/81

Time: 0840-0900

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 286.66 | — | 286.30 | 0.91 |
| X | 20 | 286.55 | — | 285.22 | — |
| X | 30 | 285.89 | — | 284.26 | 0.68 |
| X | 40 | 286.45 | 0.84 | 283.28 | — |
| X | 50 | 283.49 | — | 280.01 | 0.86 |
| X | 60 | 280.46 | — | 276.90 | 0.39 |
| X | 70 | 276.68 | — | 273.14 | 0.24 |
| C | 10 | 278.40 | 0.25 | 280.15 | 0.50 |
| C | 20 | 279.59 | 0.36 | 278.69 | 0.40 |
| C | 30 | 281.65 | 0.26 | 277.54 | 1.11 |
| C | 40 | 284.36 | 0.93 | 276.95 | 0.37 |
| C | 50 | 286.22 | — | 276.56 | — |
| C | 60 | 286.27 | 0.14 | 276.13 | — |
| C | 70 | 282.96 | 0.70 | 273.84 | 0.24 |
| L | 10 | 259.51 | 1.18 | 255.73 | 1.25 |
| L | 20 | 261.95 | 1.82 | 252.89 | 0.66 |
| L | 30 | 262.28 | 1.67 | 247.54 | 1.16 |
| L | 40 | 265.62 | 2.56 | 242.97 | 1.41 |
| L | 50 | 261.75 | 1.44 | 235.23 | 1.41 |
| L | 60 | 258.70 | 1.01 | 228.43 | 0.76 |
| L | 70 | 245.01 | 1.81 | 222.12 | 1.18 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 12.18 | 10.95 | 7.62 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.0 | 24.9 | 24.5 | 23.9 | 23.9 | 22.6 |

Date: 8/5/81

Time: 0840-0910

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 288.41 | 0.56 | 288.18 | 0.72 |
| X | 20 | 288.58 | — | 287.09 | 0.20 |
| X | 30 | 288.53 | 1.08 | 286.26 | 0.66 |
| X | 40 | 287.67 | — | 284.32 | 0.77 |
| X | 50 | 286.12 | 0.29 | 282.24 | 0.87 |
| X | 60 | 283.64 | 0.50 | 280.22 | 0.87 |
| X | 70 | 278.36 | 0.56 | 274.58 | 0.71 |
| C | 10 | 283.59 | 0.64 | 284.54 | — |
| C | 20 | 284.62 | — | 284.11 | — |
| C | 30 | 286.18 | — | 282.84 | — |
| C | 40 | 287.90 | 0.95 | 281.27 | 0.71 |
| C | 50 | 289.03 | 0.94 | 279.97 | 0.39 |
| C | 60 | 288.70 | — | 277.89 | 0.53 |
| C | 70 | 285.36 | — | 275.88 | 0.51 |
| L | 10 | 271.79 | 1.89 | 270.04 | 1.09 |
| L | 20 | 270.79 | 1.09 | 264.11 | 1.32 |
| L | 30 | 271.34 | 1.59 | 258.46 | 1.00 |
| L | 40 | 271.03 | 1.48 | 253.29 | 1.18 |
| L | 50 | 269.06 | 2.22 | 246.66 | 1.39 |
| L | 60 | 264.17 | 1.69 | 238.77 | 0.86 |
| L | 70 | 250.09 | 1.35 | 229.98 | 0.99 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 8.37 | 8.19 | 6.82 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.6 | 24.2 | 24.2 | 23.4 | 24.0 | 22.8 |

Date: 8/26/81

Time: 0919-0947

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 285.13 | 1.01 | 285.21 | 0.39 |
| X | 20 | 285.91 | 0.93 | 285.09 | 0.32 |
| X | 30 | 285.25 | 0.94 | 283.58 | 0.50 |
| X | 40 | 285.24 | 0.97 | 283.18 | 0.50 |
| X | 50 | 283.83 | 0.99 | 280.14 | 0.48 |
| X | 60 | 281.40 | 0.99 | 277.17 | 0.42 |
| X | 70 | 277.73 | 1.05 | 273.48 | 0.46 |
| C | 10 | 284.58 | 0.33 | 285.79 | 0.26 |
| C | 20 | 282.28 | 0.95 | 285.51 | 0.32 |
| C | 30 | 286.36 | 0.60 | 285.21 | 0.33 |
| C | 40 | 287.66 | 0.81 | 284.74 | 0.32 |
| C | 50 | 287.67 | 0.29 | 283.18 | 0.30 |
| C | 60 | 286.91 | 0.42 | 282.01 | 0.33 |
| C | 70 | 283.48 | 0.97 | 279.02 | 0.27 |
| L | 10 | 282.81 | 1.69 | 280.53 | 1.60 |
| L | 20 | 282.42 | 1.47 | 278.73 | 1.13 |
| L | 30 | 283.38 | 1.74 | 276.92 | 0.98 |
| L | 40 | 280.09 | 1.68 | 272.58 | 1.56 |
| L | 50 | 275.53 | 1.78 | 266.19 | 1.37 |
| L | 60 | 270.35 | 1.95 | 261.31 | 1.16 |
| L | 70 | 256.90 | 1.54 | 258.24 | 1.29 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 3.52 | 4.82 | 5.05 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 21.8 | 26.0 | — | — | 24.0 | 24.0 |

Date: 8/27/81

Time: 0921-0938

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 286.20 | 0.88 | 285.40 | 0.43 |
| X | 20 | 285.04 | 0.88 | 284.63 | 0.48 |
| X | 30 | 285.24 | 1.05 | 284.18 | 0.51 |
| X | 40 | 284.73 | 0.93 | 282.37 | 0.39 |
| X | 50 | 281.67 | 0.89 | 278.67 | 0.44 |
| X | 60 | 278.81 | 1.00 | 275.35 | 0.57 |
| X | 70 | 275.56 | 0.88 | 270.69 | 0.41 |
| C | 10 | 285.65 | 0.67 | 286.48 | 0.25 |
| C | 20 | 286.77 | 0.42 | 286.49 | 0.35 |
| C | 30 | 287.74 | 0.32 | 285.51 | 0.27 |
| C | 40 | 289.09 | 0.27 | 284.84 | 0.34 |
| C | 50 | 287.77 | 0.44 | 282.06 | 0.37 |
| C | 60 | 287.47 | 0.55 | 280.45 | 0.24 |
| C | 70 | 284.83 | 0.80 | 278.70 | 0.33 |
| L | 10 | 283.74 | 1.88 | 282.58 | 1.40 |
| L | 20 | 284.12 | 1.59 | 279.22 | 1.50 |
| L | 30 | 282.21 | 1.80 | 276.67 | 1.14 |
| L | 40 | 280.47 | 1.83 | 273.63 | 1.46 |
| L | 50 | 275.66 | 1.67 | 267.36 | 1.32 |
| L | 60 | 270.61 | 1.56 | 261.74 | 1.41 |
| L | 70 | 257.82 | 2.03 | 259.41 | 1.85 |
| P | 10 | 263.72 | 1.81 | 262.69 | 2.18 |
| P | 20 | 266.89 | 2.18 | 261.59 | 2.22 |
| P | 30 | 266.38 | 3.13 | 256.95 | 2.17 |
| P | 40 | 266.92 | 2.12 | 255.19 | 1.48 |
| P | 50 | 266.83 | 2.05 | 248.47 | 1.89 |
| P | 60 | 261.62 | 1.92 | 231.09 | 1.92 |
| P | 70 | 246.46 | 1.48 | 209.30 | 1.57 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 2.79 | 3.36 | 3.65 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.0 | 28.0 | — | — | 21.5 | — |

* P-Band measurements made during 1429-1442

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Date: 8/28/81

Time: 0916-0939

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 285.73 | 0.87 | 285.47 | 0.42 |
| X | 20 | 285.01 | 0.97 | 284.40 | 0.48 |
| X | 30 | 284.90 | 0.99 | 283.09 | 0.42 |
| X | 40 | 284.51 | 1.01 | 281.13 | 0.33 |
| X | 50 | 282.39 | 1.05 | 279.13 | 0.47 |
| X | 60 | 280.58 | 0.91 | 277.52 | 0.42 |
| X | 70 | 276.71 | 0.88 | 272.55 | 0.46 |
| C | 10 | 286.45 | 0.32 | 287.55 | 0.29 |
| C | 20 | 287.11 | 0.76 | 287.16 | 0.27 |
| C | 30 | 288.19 | 0.65 | 286.41 | 0.40 |
| C | 40 | 289.13 | 0.66 | 285.18 | 0.33 |
| C | 50 | 289.42 | 0.43 | 284.35 | 0.33 |
| C | 60 | 288.77 | 0.67 | 283.47 | 0.32 |
| C | 70 | 285.34 | 0.35 | 280.53 | 0.37 |
| L | 10 | 283.40 | 1.70 | 282.42 | 1.59 |
| L | 20 | 285.10 | 1.97 | 281.78 | 1.33 |
| L | 30 | 284.35 | 1.75 | 279.22 | 1.20 |
| L | 40 | 281.23 | 1.57 | 275.60 | 1.38 |
| L | 50 | 276.73 | 1.79 | 270.84 | 1.13 |
| L | 60 | 271.29 | 2.23 | 265.16 | 1.18 |
| L | 70 | 258.32 | 2.07 | 261.42 | 1.13 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 4.47 | 5.14 | 5.18 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.1 | 24.8 | — | — | 19.0 | — |

Date: 9/1/81

Time: 1014-1036

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 284.06 | 1.00 | 283.24 | 0.50 |
| X | 20 | 284.10 | 0.72 | 282.84 | 0.52 |
| X | 30 | 283.39 | 1.10 | 281.68 | 0.38 |
| X | 40 | 282.49 | 0.89 | 279.60 | 0.55 |
| X | 50 | 280.36 | 0.85 | 276.77 | 0.49 |
| X | 60 | 279.22 | 0.53 | 273.87 | 0.35 |
| X | 70 | 273.85 | 0.88 | 268.50 | 0.49 |
| C | 10 | 282.24 | 0.36 | 283.64 | 0.35 |
| C | 20 | 282.65 | 0.94 | 283.24 | 0.34 |
| C | 30 | 283.96 | 0.64 | 283.05 | 0.34 |
| C | 40 | 285.23 | 0.35 | 282.84 | 0.36 |
| C | 50 | 285.76 | 0.40 | 283.12 | 0.37 |
| C | 60 | 285.59 | 0.73 | 283.14 | 0.37 |
| C | 70 | 281.81 | 0.94 | 279.30 | 0.33 |
| L | 10 | 255.34 | 1.95 | 252.70 | 1.25 |
| L | 20 | 256.10 | 1.65 | 249.28 | 1.07 |
| L | 30 | 257.35 | 1.46 | 245.70 | 1.00 |
| L | 40 | 259.68 | 2.49 | 242.49 | 1.12 |
| L | 50 | 257.82 | 1.57 | 236.93 | 1.08 |
| L | 60 | 257.06 | 1.48 | 231.91 | 1.16 |
| L | 70 | 246.26 | 1.53 | 238.25 | 1.42 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 16.45 | 13.23 | 12.17 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
|---------|---------|---------|--------|--------|---------|

Date: 9/2/81

Time: 0909-0926

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 283.22 | 1.07 | 282.63 | 0.47 |
| X | 20 | 282.90 | 0.82 | 281.55 | 0.41 |
| X | 30 | 282.17 | 0.84 | 280.20 | 0.49 |
| X | 40 | 281.20 | 0.83 | 277.54 | 0.51 |
| X | 50 | 278.69 | 0.84 | 274.49 | 0.46 |
| X | 60 | 276.20 | 0.91 | 271.10 | 0.38 |
| X | 70 | 271.30 | 0.97 | 264.50 | 0.32 |
| C | 10 | 280.69 | 0.74 | 281.97 | 0.35 |
| C | 20 | 281.43 | 0.31 | 281.29 | 0.33 |
| C | 30 | 282.62 | 0.52 | 281.25 | 0.31 |
| C | 40 | 283.12 | 0.39 | 280.46 | 0.38 |
| C | 50 | 283.96 | 0.37 | 280.94 | 0.36 |
| C | 60 | 282.98 | 0.80 | 280.11 | 0.28 |
| C | 70 | 278.99 | 0.83 | 276.57 | 0.30 |
| L | 10 | 260.58 | 1.73 | 259.03 | 1.35 |
| L | 20 | 259.72 | 1.89 | 254.50 | 1.36 |
| L | 30 | 259.78 | 1.39 | 248.04 | 1.55 |
| L | 40 | 261.19 | 1.18 | 246.58 | 1.97 |
| L | 50 | 261.42 | 1.57 | 237.35 | 1.14 |
| L | 60 | 258.62 | 1.58 | 232.17 | 1.13 |
| L | 70 | 248.68 | 1.51 | 232.85 | 1.02 |
| P | 10 | 246.00 | 2.30 | 246.77 | 1.61 |
| P | 20 | 242.78 | 2.12 | 238.53 | 1.82 |
| P | 30 | 247.24 | 1.98 | 234.71 | 1.65 |
| P | 40 | 248.15 | 2.00 | 226.71 | 2.09 |
| P | 50 | 249.66 | 2.32 | 220.79 | 1.93 |
| P | 60 | 247.16 | 1.88 | 208.66 | 1.65 |
| P | 70 | 234.39 | 2.01 | 184.85 | 1.94 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 12.93 | 12.64 | 11.31 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.9 | 22.1 | 21.5 | 21.6 | 23.0 | 21.7 |

* P-Band measurements made during 1426-1438 p.m.

Date: 9/3/81

Time: 0905-0923

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 282.97 | 0.95 | 283.33 | 0.47 |
| X | 20 | 282.79 | 0.92 | 281.64 | 0.47 |
| X | 30 | 281.25 | 1.07 | 280.51 | 0.44 |
| X | 40 | 280.52 | 0.85 | 279.08 | 0.46 |
| X | 50 | 279.49 | 0.85 | 276.58 | 0.42 |
| X | 60 | 277.29 | 0.95 | 274.45 | 0.58 |
| X | 70 | 274.21 | 0.93 | 270.24 | 0.53 |
| C | 10 | 283.05 | 0.29 | 284.05 | 0.31 |
| C | 20 | 283.30 | 0.39 | 282.83 | 0.32 |
| C | 30 | 284.47 | 0.39 | 282.24 | 0.30 |
| C | 40 | 285.78 | 0.26 | 281.83 | 0.34 |
| C | 50 | 286.26 | 0.99 | 281.59 | 0.29 |
| C | 60 | 285.85 | 0.50 | 281.54 | 0.32 |
| C | 70 | 281.89 | 1.02 | 278.73 | 0.29 |
| L | 10 | 263.19 | 1.67 | 262.21 | 1.11 |
| L | 20 | 263.77 | 1.72 | 258.86 | 1.13 |
| L | 30 | 264.48 | 1.56 | 253.93 | 1.03 |
| L | 40 | 264.18 | 1.53 | 249.59 | 1.22 |
| L | 50 | 263.41 | 1.72 | 244.54 | 1.10 |
| L | 60 | 259.92 | 1.51 | 238.98 | 1.28 |
| L | 70 | 250.12 | 1.43 | 239.11 | 1.19 |
| P | 10 | 247.72 | 2.29 | 251.97 | 1.99 |
| P | 20 | 246.27 | 2.56 | 240.53 | 2.05 |
| P | 30 | 248.07 | 2.35 | 240.47 | 1.72 |
| P | 40 | 250.87 | 2.35 | 231.65 | 1.61 |
| P | 50 | 260.14 | 2.72 | 223.17 | 1.50 |
| P | 60 | 246.16 | 1.66 | 207.46 | 1.57 |
| P | 70 | 228.99 | 1.66 | 187.73 | 1.89 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 11.25 | 9.93 | 9.47 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.4 | 21.3 | 21.1 | 21.6 | 22.3 | 21.9 |

* P-Band measurements made during 1330-1352 p.m.

Date: 9/4/81

Time: 0856-0911

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 285.23 | 0.85 | 284.60 | 0.43 |
| X | 20 | 285.44 | 0.93 | 284.23 | 0.44 |
| X | 30 | 284.75 | 0.93 | 283.07 | 0.38 |
| X | 40 | 283.48 | 1.00 | 281.25 | 0.35 |
| X | 50 | 282.18 | 0.86 | 279.03 | 0.42 |
| X | 60 | 279.70 | 1.02 | 275.92 | 0.42 |
| X | 70 | 275.40 | 0.92 | 270.96 | 0.58 |
| C | 10 | 281.61 | 0.67 | 282.88 | 0.35 |
| C | 20 | 282.11 | 0.67 | 282.13 | 0.30 |
| C | 30 | 283.28 | 0.60 | 281.54 | 0.24 |
| C | 40 | 284.58 | 0.84 | 281.22 | 0.35 |
| C | 50 | 284.81 | 0.67 | 280.36 | 0.27 |
| C | 60 | 284.21 | 0.47 | 280.21 | 0.33 |
| C | 70 | 280.40 | 0.33 | 277.65 | 0.39 |
| L | 10 | 267.91 | 1.67 | 265.15 | 0.99 |
| L | 20 | 268.30 | 1.99 | 262.83 | 1.37 |
| L | 30 | 268.30 | 1.68 | 258.09 | 1.77 |
| L | 40 | 267.14 | 1.60 | 251.13 | 1.24 |
| L | 50 | 265.62 | 1.65 | 245.82 | 1.50 |
| L | 60 | 261.76 | 1.54 | 237.60 | 1.22 |
| L | 70 | 250.91 | 1.45 | 236.02 | 1.41 |
| P | 10 | 250.68 | 2.03 | 252.26 | 2.24 |
| P | 20 | 248.05 | 2.02 | 245.09 | 1.51 |
| P | 30 | 249.68 | 2.14 | 240.02 | 1.65 |
| P | 40 | 252.61 | 2.51 | 230.79 | 2.23 |
| P | 50 | 250.65 | 2.41 | 225.70 | 1.31 |
| P | 60 | 246.19 | 2.05 | 212.66 | 1.39 |
| P | 70 | 232.56 | 1.87 | 192.02 | 1.24 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 10.78 | 10.48 | 9.50 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 20.8 | 21.0 | 19.8 | 20.5 | 22.5 | 21.4 |

* P-Band measurements made during 1032-1044 a.m.

Date: 9/11/81

Time: 0928-0946

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 284.03 | 0.87 | 282.96 | 0.47 |
| X | 20 | 284.60 | 0.86 | 283.66 | 0.45 |
| X | 30 | 283.31 | 0.94 | 281.19 | 0.38 |
| X | 40 | 284.04 | 0.96 | 281.58 | 0.53 |
| X | 50 | 282.62 | 1.01 | 279.50 | 0.50 |
| X | 60 | 280.47 | 0.92 | 274.75 | 0.43 |
| X | 70 | 276.42 | 0.94 | 271.86 | 0.51 |
| C | 10 | 284.85 | 0.73 | 286.12 | 0.28 |
| C | 20 | 285.47 | 0.66 | 285.86 | 0.32 |
| C | 30 | 286.42 | 0.36 | 285.33 | 0.30 |
| C | 40 | 286.78 | 0.27 | 284.99 | 0.33 |
| C | 50 | 286.67 | 0.57 | 284.11 | 0.28 |
| C | 60 | 286.39 | 0.37 | 283.01 | 0.27 |
| C | 70 | 281.36 | 0.54 | 278.81 | 0.31 |
| L | 10 | 277.28 | 1.82 | 274.25 | 1.53 |
| L | 20 | 276.69 | 1.79 | 271.28 | 1.32 |
| L | 30 | 274.18 | 1.47 | 266.89 | 1.08 |
| L | 40 | 272.30 | 2.04 | 264.56 | 1.15 |
| L | 50 | 269.42 | 1.87 | 257.05 | 1.24 |
| L | 60 | 266.34 | 1.55 | 247.46 | 1.31 |
| L | 70 | 255.90 | 1.89 | 240.97 | 1.26 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 6.41 | 7.67 | 6.89 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.9 | 23.0 | 21.8 | 18.8 | 19.3 | 17.7 |

Date: 9/14/81

Time: 0921-0943

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 286.07 | 0.98 | 285.02 | 0.62 |
| X | 20 | 286.68 | 0.74 | 284.96 | 0.37 |
| X | 30 | 285.51 | 0.99 | 283.77 | 0.59 |
| X | 40 | 283.37 | 1.02 | 282.14 | 0.52 |
| X | 50 | 283.09 | 1.01 | 280.13 | 0.56 |
| X | 60 | 281.12 | 1.01 | 276.48 | 0.43 |
| X | 70 | 276.56 | 0.86 | 271.90 | 0.46 |
| C | 10 | 287.57 | 0.96 | 288.99 | 0.26 |
| C | 20 | 288.54 | 0.49 | 288.93 | 0.24 |
| C | 30 | 289.48 | 0.49 | 288.54 | 0.30 |
| C | 40 | 200.14 | 0.40 | 287.93 | 0.34 |
| C | 50 | 291.35 | 0.29 | 287.45 | 0.32 |
| C | 60 | 290.45 | 0.32 | 286.72 | 0.34 |
| C | 70 | 286.30 | 0.78 | 282.52 | 0.34 |
| L | 10 | 282.14 | 1.89 | 280.29 | 1.54 |
| L | 20 | 281.65 | 1.62 | 278.43 | 1.17 |
| L | 30 | 280.14 | 1.79 | 275.04 | 1.52 |
| L | 40 | 277.09 | 1.87 | 270.87 | 1.22 |
| L | 50 | 274.17 | 1.86 | 263.27 | 1.08 |
| L | 60 | — | — | 254.48 | 1.22 |
| L | 70 | 258.95 | 1.63 | 251.44 | 1.19 |
| P | 10 | 256.92 | 2.02 | 256.31 | 1.59 |
| P | 20 | 257.21 | 2.23 | 255.35 | 1.91 |
| P | 30 | 256.92 | 1.76 | 249.06 | 1.64 |
| P | 40 | 258.96 | 1.66 | 245.27 | 2.65 |
| P | 50 | 257.05 | 2.33 | 236.85 | 1.87 |
| P | 60 | 250.63 | 2.20 | 223.14 | 1.52 |
| P | 70 | 238.37 | 4.12 | 217.09 | 9.61 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 4.23 | 6.20 | 6.30 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.0 | 22.0 | 23.1 | 20.8 | 20.8 | 19.3 |

* P-Band measurements made during 1405-1421 p.m.

Date: 9/15/81

Time: 0915-0927

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | | | | |
| X | 20 | | | | |
| X | 30 | | | | |
| X | 40 | | | | |
| X | 50 | | | | |
| X | 60 | | | | |
| X | 70 | | | | |
| C | 10 | | | | |
| C | 20 | | | | |
| C | 30 | | | | |
| C | 40 | | | | |
| C | 50 | | | | |
| C | 60 | | | | |
| C | 70 | | | | |
| L | 10 | | | | |
| L | 20 | | | | |
| L | 30 | | | | |
| L | 40 | | | | |
| L | 50 | | | | |
| L | 60 | | | | |
| L | 70 | | | | |
| P | 10 | 261.14 | 2.16 | 260.77 | 2.60 |
| P | 20 | 262.00 | 2.15 | 255.62 | 1.50 |
| P | 30 | 260.38 | 1.77 | 246.37 | 1.67 |
| P | 40 | 260.25 | 2.58 | 239.97 | 2.71 |
| P | 50 | 259.68 | 2.07 | 242.53 | 2.32 |
| P | 60 | 249.74 | 2.13 | 229.99 | 2.09 |
| P | 70 | 229.74 | 1.73 | 210.15 | 2.16 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 3.10 | 4.40 | 4.12 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.7 | 21.0 | | | 22.5 | |

Date: 9/17/81

Time: 1138-1159

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 282.46 | 0.99 | 282.41 | 0.50 |
| X | 20 | 281.89 | 0.75 | 281.58 | 0.51 |
| X | 30 | 281.67 | 0.83 | 280.61 | 0.51 |
| X | 40 | 281.82 | 0.78 | 279.83 | 0.49 |
| X | 50 | 280.91 | 0.94 | 277.96 | 0.40 |
| X | 60 | 277.75 | 0.88 | 272.62 | 0.45 |
| X | 70 | 274.12 | 0.80 | 268.60 | 0.41 |
| C | 10 | 283.56 | 0.46 | 285.06 | 0.32 |
| C | 20 | 284.13 | 0.38 | 285.12 | 0.33 |
| C | 30 | 284.50 | 1.07 | 284.70 | 0.30 |
| C | 40 | 285.22 | 0.75 | 284.78 | 0.26 |
| C | 50 | 286.22 | 0.32 | 284.98 | 0.29 |
| C | 60 | 285.30 | 0.83 | 283.64 | 0.38 |
| C | 70 | 280.28 | 0.52 | 278.24 | 0.40 |
| L | 10 | 256.79 | 1.42 | 254.56 | 1.21 |
| L | 20 | 257.68 | 1.41 | 252.11 | 1.30 |
| L | 30 | 257.12 | 1.41 | 248.31 | 0.97 |
| L | 40 | 257.64 | 1.87 | 246.15 | 1.40 |
| L | 50 | 257.50 | 1.35 | 240.70 | 1.28 |
| L | 60 | 254.52 | 1.74 | 233.10 | 1.15 |
| L | 70 | 246.89 | 1.71 | 233.47 | 1.29 |
| P | 10 | 240.81 | 1.94 | 238.21 | 1.84 * |
| P | 20 | 240.57 | 2.36 | 226.87 | 1.75 |
| P | 30 | 251.16 | 4.74 | 219.38 | 1.70 |
| P | 40 | 242.59 | 1.89 | 218.50 | 1.66 |
| P | 50 | 238.96 | 2.43 | 211.91 | 1.89 |
| P | 60 | 231.46 | 1.34 | 204.85 | 1.51 |
| P | 70 | 210.28 | 2.19 | — | — |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 17.04 | 14.51 | 14.02 |
| | 10.19 | 17.75 | 14.31 * |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 21.9 | 22.0 | 20.8 | 21.0 | 22.0 | 21.2 |
| 18.0 | 19.0 | 18.7 | 19.0 | 21.0 | 20.0 * |

* P-Band measurements made during 0922-0935 a.m.

Date: 9/18/81

Time: 1151-1209

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 275.49 | 0.92 | 277.67 | 0.44 |
| X | 20 | 275.05 | 1.09 | 274.36 | 0.44 |
| X | 30 | 274.73 | 0.87 | 274.21 | 0.50 |
| X | 40 | 273.00 | 0.99 | 271.94 | 0.50 |
| X | 50 | 272.50 | 0.86 | 270.17 | 0.50 |
| X | 60 | 270.19 | 0.95 | 266.18 | 0.47 |
| X | 70 | 266.92 | 0.93 | 261.61 | 0.46 |
| C | 10 | 280.65 | 0.90 | 281.94 | 0.29 |
| C | 20 | 280.88 | 0.28 | 281.43 | 0.32 |
| C | 30 | 281.06 | 0.44 | 281.54 | 0.28 |
| C | 40 | 281.18 | 0.41 | 281.13 | 0.30 |
| C | 50 | 281.27 | 0.51 | 280.81 | 0.24 |
| C | 60 | 280.02 | 0.27 | 279.09 | 0.32 |
| C | 70 | 276.42 | 0.34 | 274.66 | 0.25 |
| L | 10 | 257.05 | 1.39 | 254.17 | 1.18 |
| L | 20 | 255.24 | 1.81 | 250.63 | 1.19 |
| L | 30 | 254.34 | 1.38 | 247.33 | 1.21 |
| L | 40 | 253.41 | 2.10 | 244.15 | 1.20 |
| L | 50 | 252.39 | 2.09 | 240.73 | 1.21 |
| L | 60 | 250.81 | 1.97 | 236.16 | 1.05 |
| L | 70 | 245.13 | 1.58 | 236.73 | 1.49 |
| P | 10 | 232.13 | 1.72 | 229.27 | 1.96 * |
| P | 20 | 234.31 | 2.34 | 221.67 | 1.68 |
| P | 30 | 237.02 | 2.11 | 220.02 | 1.96 |
| P | 40 | 242.51 | 2.05 | 216.79 | 1.73 |
| P | 50 | 240.30 | 2.66 | 212.77 | 2.17 |
| P | 60 | 228.85 | 2.66 | 194.63 | 1.77 |
| P | 70 | 192.54 | 1.97 | 167.78 | 1.93 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 17.33 | 15.46 | 14.78 |
| | 16.10 | 15.05 | 15.56 * |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 17.3 | 16.3 | 17.2 | 18.1 | 19.5 | 18.8 |
| 15.8 | 15.8 | 16.3 | 17.5 | 19.5 | 18.7 * |

* P-Band measurements made during 1005-1022 a.m.

Date: 9/28/81

Time: 0921-0939

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 281.28 | 0.95 | 281.04 | 0.51 |
| X | 20 | 281.72 | 0.92 | 280.83 | 0.45 |
| X | 30 | 281.01 | 0.81 | 280.05 | 0.63 |
| X | 40 | 279.78 | 0.90 | 278.13 | 0.49 |
| X | 50 | 277.15 | 0.88 | 275.24 | 0.44 |
| X | 60 | 275.07 | 1.01 | 272.82 | 0.45 |
| X | 70 | 269.91 | 1.02 | 267.40 | 0.48 |
| C | 10 | 280.48 | 0.30 | 281.54 | 0.39 |
| C | 20 | 281.03 | 0.29 | 281.27 | 0.38 |
| C | 30 | 282.30 | 0.37 | 281.06 | 0.33 |
| C | 40 | 282.11 | 0.81 | 280.54 | 0.31 |
| C | 50 | 282.20 | 0.76 | 279.83 | 0.37 |
| C | 60 | 281.83 | 0.22 | 278.30 | 0.30 |
| C | 70 | 276.97 | 0.86 | 274.02 | 0.26 |
| L | 10 | 262.09 | 1.83 | 260.32 | 1.37 |
| L | 20 | 262.97 | 1.44 | 258.63 | 1.39 |
| L | 30 | 263.76 | 1.80 | 255.38 | 1.17 |
| L | 40 | 261.95 | 2.22 | 250.88 | 1.22 |
| L | 50 | 259.54 | 1.46 | 243.01 | 0.98 |
| L | 60 | 255.92 | 1.38 | 233.36 | 1.30 |
| L | 70 | 247.43 | 1.55 | 221.49 | 1.17 |
| P | 10 | 248.98 | 2.69 | 251.16 | 1.76 |
| P | 20 | 247.47 | 2.86 | 243.32 | 1.98 |
| P | 30 | 249.77 | 2.47 | 233.93 | 2.47 |
| P | 40 | 252.76 | 2.45 | 232.11 | 2.77 |
| P | 50 | 254.47 | 2.53 | 231.23 | 2.48 |
| P | 60 | 247.06 | 2.59 | 222.08 | 2.64 |
| P | 70 | 229.93 | 2.35 | 207.17 | 2.87 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 11.41 | 10.96 | 10.32 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
|---------|---------|---------|--------|--------|---------|

* P-Band measurements made during 1118-1139 a.m.

Date: 9/29/81

Time: 0926-0944

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 273.27 | 0.87 | 272.54 | 0.38 |
| X | 20 | 272.86 | 0.79 | 271.43 | 0.50 |
| X | 30 | 273.70 | 0.76 | 271.37 | 0.45 |
| X | 40 | 272.09 | 0.92 | 268.26 | 0.37 |
| X | 50 | 271.15 | 0.83 | 266.85 | 0.53 |
| X | 60 | 270.27 | 0.85 | 264.71 | 0.46 |
| X | 70 | 267.77 | 0.99 | 260.57 | 0.40 |
| C | 10 | 277.33 | 0.66 | 278.17 | 0.32 |
| C | 20 | 277.83 | 1.01 | 278.00 | 0.31 |
| C | 30 | 278.90 | 0.37 | 278.29 | 0.36 |
| C | 40 | 278.96 | 0.35 | 277.69 | 0.32 |
| C | 50 | 278.87 | 0.27 | 276.94 | 0.31 |
| C | 60 | 278.21 | 0.28 | 275.24 | 0.31 |
| C | 70 | 274.35 | 0.70 | 270.95 | 0.33 |
| L | 10 | 263.94 | 1.72 | 262.84 | 1.13 |
| L | 20 | 263.24 | 1.70 | 259.12 | 1.32 |
| L | 30 | 263.10 | 1.71 | 257.02 | 1.32 |
| L | 40 | 260.28 | 1.92 | 252.19 | 1.33 |
| L | 50 | 257.65 | 1.13 | 245.10 | 1.16 |
| L | 60 | 253.72 | 1.36 | 235.69 | 0.83 |
| L | 70 | 244.35 | 1.34 | 225.71 | 1.15 |
| P | 10 | 244.47 | 2.55 | 247.45 | 2.36 |
| P | 20 | 244.94 | 2.59 | 239.27 | 2.31 |
| P | 30 | 245.77 | 2.57 | 237.58 | 2.44 |
| P | 40 | 247.85 | 2.75 | 235.38 | 2.12 |
| P | 50 | 247.17 | 2.26 | 226.66 | 2.67 |
| P | 60 | 242.26 | 2.85 | 220.29 | 2.36 |
| P | 70 | 229.25 | 2.45 | 203.77 | 2.01 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 8.78 | 8.52 | 9.20 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 13.7 | 12.0 | 12.8 | 13.2 | 14.8 | 14.6 |

* P-Band measurements made during 1118-1136 a.m.



Date: 9/30/81

Time: 1119-1135

Plot No.: 152

Field: Grass

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 277.19 | 0.89 | 279.06 | 0.59 |
| X | 20 | 275.40 | 0.84 | 277.89 | 0.58 |
| X | 30 | 274.65 | 0.96 | 276.20 | 0.55 |
| X | 40 | 273.51 | 0.80 | 273.58 | 0.47 |
| X | 50 | 272.37 | 0.82 | 271.88 | 0.43 |
| X | 60 | 270.67 | 0.83 | 269.29 | 0.53 |
| X | 70 | 268.09 | 0.81 | 264.04 | 0.39 |
| C | 10 | 280.14 | 0.40 | 281.27 | 0.38 |
| C | 20 | 280.40 | 0.53 | 280.96 | 0.32 |
| C | 30 | 280.75 | 0.31 | 280.53 | 0.31 |
| C | 40 | 280.84 | 0.76 | 279.62 | 0.32 |
| C | 50 | 280.46 | 0.64 | 279.11 | 0.26 |
| C | 60 | 279.66 | 0.59 | 277.85 | 0.31 |
| C | 70 | 275.75 | 0.25 | 273.54 | 0.32 |
| L | 10 | 264.95 | 1.53 | 262.41 | 1.11 |
| L | 20 | 262.63 | 1.62 | 258.71 | 1.34 |
| L | 30 | 263.15 | 1.70 | 256.76 | 1.06 |
| L | 40 | 260.12 | 1.61 | 251.29 | 1.33 |
| L | 50 | 257.40 | 1.73 | 245.64 | 1.14 |
| L | 60 | 253.77 | 1.78 | 239.82 | 1.13 |
| L | 70 | 245.20 | 1.64 | 230.31 | 1.12 |
| P | 10 | 248.36 | 2.51 | 247.22 | 2.29 * |
| P | 20 | 248.11 | 2.67 | 243.00 | 2.64 |
| P | 30 | 250.54 | 2.75 | 241.52 | 3.72 |
| P | 40 | 251.80 | 2.57 | 235.00 | 2.84 |
| P | 50 | 251.27 | 2.67 | 229.46 | 2.65 |
| P | 60 | 242.49 | 2.71 | 221.44 | 2.45 |
| P | 70 | 228.97 | 2.51 | 208.87 | 2.38 |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 9.73 | 8.88 | 8.55 |
| | 7.94 | 8.16 | 8.99 * |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 15.7 | 15.8 | 15.5 | 15.7 | 17.0 | 17.1 |
| 15.3 | 16.0 | 15.8 | 15.4 | 17.0 | 17.0 * |

* P-Band measurements made during 0904-0919 a.m.

Date: 6/24/81

Time: 1110-1140

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 290.67 | — | 290.47 | 0.70 |
| X | 20 | 290.60 | — | 288.12 | 0.68 |
| X | 30 | 290.95 | 0.86 | 284.36 | 0.77 |
| X | 40 | 291.83 | 0.67 | 279.48 | 0.44 |
| X | 50 | 291.59 | 0.95 | 272.02 | — |
| X | 60 | 288.64 | 0.82 | 258.96 | — |
| X | 70 | 279.63 | 0.32 | 234.94 | 0.45 |
| C | 10 | 292.92 | — | 293.69 | 0.35 |
| C | 20 | 291.74 | 0.86 | 292.53 | — |
| C | 30 | 293.73 | — | 291.20 | 0.10 |
| C | 40 | 295.13 | 0.97 | 287.55 | — |
| C | 50 | 296.11 | — | 280.49 | 0.70 |
| C | 60 | 292.55 | — | 267.77 | — |
| C | 70 | 278.94 | — | 246.73 | 0.28 |
| L | 10 | 270.80 | 1.43 | 270.44 | 1.61 |
| L | 20 | 271.77 | 1.69 | 268.98 | 1.48 |
| L | 30 | 271.52 | 1.23 | 262.84 | 1.40 |
| L | 40 | 268.16 | 0.65 | 247.59 | 1.15 |
| L | 50 | 266.77 | 1.48 | 232.55 | 0.54 |
| L | 60 | 262.28 | 1.77 | 211.12 | 1.02 |
| L | 70 | 245.61 | 1.98 | 179.34 | 1.20 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 2.33 | 9.03 | 11.85 | 12.84 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.1 | 39.4 | 30.3 | 29.9 | 30.0 | 27.6 |

Date: 6/24/81

Time: 1315-1340

Plot No.: 131

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 297.02 | 0.55 | 295.94 | 0.96 |
| X | 20 | 291.89 | 0.65 | 285.71 | 0.93 |
| X | 30 | 293.69 | 0.37 | 286.02 | 0.94 |
| X | 40 | 295.71 | — | 284.54 | 0.82 |
| X | 50 | 295.77 | — | 278.67 | 0.78 |
| X | 60 | 294.14 | — | 273.41 | 0.67 |
| X | 70 | 287.45 | 0.45 | 260.54 | 0.63 |
| C | 10 | 296.98 | — | 297.04 | — |
| C | 20 | 298.25 | 0.92 | 295.83 | — |
| C | 30 | 297.82 | — | 294.53 | 0.72 |
| C | 40 | 299.37 | 0.75 | 292.11 | — |
| C | 50 | 300.33 | — | 289.00 | — |
| C | 60 | 297.93 | 0.59 | 281.92 | 0.86 |
| C | 70 | 286.72 | — | 264.10 | — |
| L | 10 | 284.51 | 1.88 | 287.16 | 0.24 |
| L | 20 | 286.61 | 1.69 | 286.70 | 0.89 |
| L | 30 | 275.34 | 1.55 | 267.09 | 1.39 |
| L | 40 | 272.28 | 1.43 | 253.26 | 1.05 |
| L | 50 | 270.11 | 1.73 | 238.96 | 1.22 |
| L | 60 | 264.30 | 1.62 | 215.59 | 1.01 |
| L | 70 | 243.03 | 1.72 | 182.72 | 1.34 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.08 | 7.33 | 11.00 | 11.85 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.5 | 39.5 | 32.9 | 33.3 | 32.8 | 30.5 |

Date: 7/13/81

Time: 1254-1316

Plot No.: 131

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 284.86 | 0.82 | 286.63 | 1.11 |
| X | 20 | 284.06 | 0.40 | 283.54 | — |
| X | 30 | 281.96 | 0.12 | 279.67 | 0.72 |
| X | 40 | 282.01 | 0.39 | 275.71 | 0.64 |
| X | 50 | 274.37 | 0.29 | 266.14 | — |
| X | 60 | 269.16 | — | 259.93 | — |
| X | 70 | 265.15 | 0.18 | 255.04 | 0.50 |
| C | 10 | 286.42 | — | 287.12 | — |
| C | 20 | 286.69 | — | 286.14 | 1.12 |
| C | 30 | 287.11 | — | 284.75 | — |
| C | 40 | 287.52 | — | 282.01 | 0.54 |
| C | 50 | 286.58 | 0.24 | 277.70 | 0.31 |
| C | 60 | 284.35 | — | 272.45 | — |
| C | 70 | 277.39 | — | 261.84 | — |
| L | 10 | 291.10 | 1.53 | 290.17 | 1.25 |
| L | 20 | 288.62 | 1.67 | 282.10 | 1.04 |
| L | 30 | 285.46 | 1.92 | 275.78 | 1.64 |
| L | 40 | 281.89 | 1.75 | 272.20 | 1.23 |
| L | 50 | 277.32 | 2.08 | 264.84 | 1.49 |
| L | 60 | 269.64 | 1.87 | 256.67 | 0.90 |
| L | 70 | 254.88 | 1.62 | 246.79 | 1.25 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.62 | 5.51 | 7.53 | 8.25 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 32.2 | 40.8 | 33.9 | 31.5 | 32.0 | 30.0 |

Date: 7/13/81

Time: 1403-1428

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 276.63 | 1.27 | 278.22 | — |
| X | 20 | 275.67 | — | 276.00 | 0.55 |
| X | 30 | 276.48 | — | 275.12 | — |
| X | 40 | 274.11 | 0.97 | 270.58 | 0.81 |
| X | 50 | 272.26 | 0.22 | 264.29 | 0.91 |
| X | 60 | 273.31 | 0.35 | 259.64 | 1.32 |
| X | 70 | 264.27 | 0.40 | 244.41 | 0.76 |
| C | 10 | 285.18 | 0.11 | 286.59 | 0.76 |
| C | 20 | 285.27 | 0.56 | 285.36 | 0.49 |
| C | 30 | 285.50 | 0.88 | 283.10 | — |
| C | 40 | 285.35 | 0.29 | 279.51 | — |
| C | 50 | 285.09 | — | 274.68 | — |
| C | 60 | 281.93 | 0.44 | 267.87 | 0.38 |
| C | 70 | 273.31 | — | 255.64 | 0.88 |
| L | 10 | 282.14 | 1.39 | 279.61 | 1.02 |
| L | 20 | 281.45 | 1.88 | 277.09 | 1.42 |
| L | 30 | 281.43 | 1.54 | 271.66 | 1.25 |
| L | 40 | 277.55 | 1.72 | 267.16 | 0.93 |
| L | 50 | 274.92 | 1.64 | 260.20 | 1.57 |
| L | 60 | 269.64 | 1.90 | 252.50 | 0.67 |
| L | 70 | 258.74 | 2.82 | 245.58 | — |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.67 | 5.50 | 7.53 | 9.10 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 32.3 | 31.3 | 32.3 | 31.9 | 31.7 | 30.7 |

Date: 7/14/81

Time: 1312-1340

Plot No.: 131

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.20 | 1.07 | 280.30 | 0.74 |
| X | 20 | 279.03 | — | 278.12 | 1.13 |
| X | 30 | 279.16 | 1.18 | 276.40 | — |
| X | 40 | 277.78 | 0.76 | 272.65 | 0.72 |
| X | 50 | 278.24 | — | 270.47 | — |
| X | 60 | 275.46 | 0.60 | 266.09 | 0.76 |
| X | 70 | 270.96 | 0.97 | 258.83 | 1.10 |
| C | 10 | 286.89 | — | 288.32 | — |
| C | 20 | 287.48 | — | 287.05 | — |
| C | 30 | 287.22 | — | 284.53 | — |
| C | 40 | 287.33 | 0.42 | 282.39 | 0.32 |
| C | 50 | 286.48 | 0.69 | 277.93 | 0.55 |
| C | 60 | 283.79 | 0.54 | 270.48 | 0.57 |
| C | 70 | 277.33 | — | 260.84 | 0.95 |
| L | 10 | 294.48 | 1.64 | 293.03 | 1.41 |
| L | 20 | 288.83 | 1.50 | 282.86 | 1.76 |
| L | 30 | 286.47 | 1.88 | 277.95 | 1.58 |
| L | 40 | 283.79 | 1.37 | 273.83 | 1.09 |
| L | 50 | 280.04 | 1.92 | 268.08 | 0.97 |
| L | 60 | 272.81 | 1.93 | 259.63 | 0.67 |
| L | 70 | 260.75 | 1.81 | 253.06 | 1.42 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.07 | 2.76 | 7.13 | 6.53 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 32.3 | 35.4 | 34.6 | 34.7 | 32.0 | 29.4 |

Date: 7/21/81

Time: 1040-1107

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 268.25 | 1.03 | 267.63 | 0.72 |
| X | 20 | 267.94 | 0.59 | 265.60 | 0.56 |
| X | 30 | 268.47 | 0.84 | 263.64 | 0.56 |
| X | 40 | 271.00 | 0.25 | 263.34 | 0.93 |
| X | 50 | 272.58 | — | 263.29 | 0.79 |
| X | 60 | 271.11 | 1.04 | 259.97 | — |
| X | 70 | 265.77 | 0.74 | 251.30 | 0.52 |
| C | 10 | 271.37 | 0.54 | 273.32 | — |
| C | 20 | 272.83 | — | 273.43 | — |
| C | 30 | 275.66 | — | 273.48 | 0.42 |
| C | 40 | 277.77 | 0.73 | 272.92 | 0.99 |
| C | 50 | 278.91 | — | 271.46 | 0.83 |
| C | 60 | 278.04 | — | 266.69 | 0.31 |
| C | 70 | 272.62 | — | 257.57 | 0.64 |
| L | 10 | 271.13 | 1.76 | 269.95 | 1.00 |
| L | 20 | — | — | — | — |
| L | 30 | 273.21 | 1.48 | 261.69 | 0.72 |
| L | 40 | 270.57 | 1.80 | 260.47 | 1.19 |
| L | 50 | 268.78 | 1.55 | 257.53 | 1.33 |
| L | 60 | 267.32 | 1.61 | 256.13 | 1.06 |
| L | 70 | 256.81 | 0.55 | 255.68 | 1.49 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 13.30 | 14.22 | 11.87 | 10.28 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.1 | 28.8 | 29.6 | 27.5 | 27.0 | 25.9 |

Date: 7/21/81

Time: 1145-1212

Plot No.: 131

Field: Corn (1)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 273.81 | 0.75 | 271.52 | 0.86 |
| X | 20 | 275.35 | 1.00 | 271.28 | 0.28 |
| X | 30 | 274.00 | 0.76 | 269.65 | — |
| X | 40 | 276.97 | 0.47 | 270.97 | 0.98 |
| X | 50 | 274.76 | 0.80 | 267.14 | — |
| X | 60 | 271.89 | 1.30 | 261.71 | — |
| X | 70 | 269.81 | — | 254.43 | 0.44 |
| C | 10 | 275.00 | 0.84 | 275.87 | — |
| C | 20 | 276.45 | — | 276.66 | 0.52 |
| C | 30 | 278.92 | — | 277.23 | 1.14 |
| C | 40 | 279.93 | 0.34 | 276.49 | — |
| C | 50 | 280.19 | 0.75 | 273.98 | — |
| C | 60 | 278.96 | — | 270.21 | — |
| C | 70 | 274.14 | 1.19 | 259.05 | — |
| L | 10 | 278.45 | 1.71 | 270.80 | 1.02 |
| L | 20 | 281.83 | 1.21 | 270.64 | 1.21 |
| L | 30 | 278.81 | 1.48 | 264.09 | 1.23 |
| L | 40 | 276.26 | 1.45 | 259.93 | 1.39 |
| L | 50 | 272.87 | 1.24 | 257.86 | 1.42 |
| L | 60 | 267.52 | 1.45 | 255.82 | 1.03 |
| L | 70 | 255.03 | 1.56 | 254.37 | 1.20 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 11.61 | 11.88 | 10.63 | 10.20 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.7 | 28.3 | 27.5 | 27.2 | 26.6 | 25.4 |

Date: 7/22/81

Time: 1105-1130

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 274.33 | 0.47 | 275.67 | 0.87 |
| X | 20 | 271.79 | — | 269.69 | — |
| X | 30 | 272.11 | 0.83 | 268.36 | 0.93 |
| X | 40 | 272.99 | — | 267.32 | 0.43 |
| X | 50 | 273.40 | — | 265.42 | 0.52 |
| X | 60 | 270.95 | 0.36 | 259.94 | — |
| X | 70 | 268.05 | — | 253.66 | — |
| C | 10 | 278.19 | 0.19 | 280.18 | 0.89 |
| C | 20 | 278.75 | — | 279.59 | — |
| C | 30 | 280.21 | — | 278.53 | — |
| C | 40 | 281.47 | — | 276.77 | — |
| C | 50 | 282.02 | 0.30 | 274.71 | 0.22 |
| C | 60 | 280.05 | 0.56 | 269.36 | 0.29 |
| C | 70 | 274.44 | 0.85 | 261.03 | 0.75 |
| L | 10 | 281.40 | 2.11 | 281.06 | 1.29 |
| L | 20 | 281.71 | 1.65 | 277.11 | 1.08 |
| L | 30 | 281.39 | 1.64 | 274.20 | 1.06 |
| L | 40 | 276.90 | 1.91 | 268.14 | 1.23 |
| L | 50 | 275.59 | 2.11 | 265.53 | 1.07 |
| L | 60 | 270.02 | 1.40 | 262.90 | 1.36 |
| L | 70 | 258.12 | 1.35 | 260.03 | 1.49 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 7.04 | 6.80 | 8.55 | 8.74 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.5 | 26.9 | 26.1 | 25.5 | 25.2 | 24.0 |

Date: 7/22/81

Time: 1246-1313

Plot No.: 131

Field: Corn (I)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 274.71 | 1.02 | 274.78 | 1.12 |
| X | 20 | 278.97 | — | 277.03 | — |
| X | 30 | 277.48 | 0.62 | 274.19 | 0.71 |
| X | 40 | 277.02 | 0.86 | 271.46 | — |
| X | 50 | 275.18 | — | 269.09 | — |
| X | 60 | 270.58 | 0.26 | 260.22 | 0.63 |
| X | 70 | 269.02 | 0.97 | 253.39 | 1.10 |
| C | 10 | 281.74 | 0.69 | 283.29 | — |
| C | 20 | 283.96 | 0.35 | 284.08 | — |
| C | 30 | 284.51 | — | 283.42 | 0.82 |
| C | 40 | 284.80 | 0.42 | 281.68 | 0.22 |
| C | 50 | 283.76 | — | 278.40 | 0.38 |
| C | 60 | 280.64 | 0.47 | 272.50 | 0.64 |
| C | 70 | 274.02 | 0.84 | 262.01 | — |
| L | 10 | 289.05 | 1.58 | 285.41 | 1.23 |
| L | 20 | 289.16 | 1.62 | 282.69 | 1.25 |
| L | 30 | 284.49 | 2.15 | 274.37 | 1.60 |
| L | 40 | 281.62 | 2.02 | 271.19 | 1.94 |
| L | 50 | 276.20 | 1.62 | 266.70 | 0.52 |
| L | 60 | 269.84 | 1.67 | 264.09 | 1.02 |
| L | 70 | 256.97 | 1.59 | 259.73 | 1.10 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.34 | 7.46 | 9.24 | 8.65 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.5 | 28.4 | 30.3 | 28.2 | 27.1 | 25.0 |

Date: 7/23/81

Time: 1325-1351

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 281.17 | 0.69 | 281.84 | 0.65 |
| X | 20 | 277.54 | 0.63 | 277.18 | — |
| X | 30 | 279.88 | — | 278.63 | 1.09 |
| X | 40 | 276.94 | 0.54 | 273.53 | — |
| X | 50 | 276.34 | 0.59 | 271.12 | — |
| X | 60 | 274.42 | — | 267.65 | — |
| X | 70 | 268.74 | 0.65 | 258.50 | 0.80 |
| C | 10 | 284.45 | 0.84 | 286.67 | 0.97 |
| C | 20 | 284.69 | 0.58 | 286.26 | 0.78 |
| C | 30 | 284.77 | 0.25 | 284.49 | 0.31 |
| C | 40 | 285.20 | 0.50 | 282.57 | — |
| C | 50 | 284.50 | — | 278.95 | — |
| C | 60 | 281.96 | 0.63 | 272.96 | — |
| C | 70 | 274.83 | — | 263.73 | — |
| L | 10 | 286.87 | 1.84 | 285.83 | 0.81 |
| L | 20 | 285.42 | 1.80 | 281.99 | 0.26 |
| L | 30 | 283.66 | 2.04 | 278.69 | 1.62 |
| L | 40 | 280.76 | 2.07 | 274.79 | 1.33 |
| L | 50 | 277.51 | 2.29 | 270.67 | 1.43 |
| L | 60 | 270.65 | 1.49 | 265.14 | 1.38 |
| L | 70 | 257.66 | 1.91 | 260.84 | 1.56 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.67 | 5.84 | 7.60 | 9.28 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.4 | 29.8 | 27.5 | 27.0 | 25.8 | 24.1 |

Date: 7/23/81

Time: 1404-1432

Plot No.: 131

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 275.54 | 1.02 | 275.97 | 0.93 |
| X | 20 | 277.16 | — | 276.90 | 0.81 |
| X | 30 | 276.28 | 0.53 | 273.79 | 0.47 |
| X | 40 | 275.32 | 0.54 | 270.96 | 0.90 |
| X | 50 | 276.46 | — | 272.23 | 0.95 |
| X | 60 | 275.92 | 0.62 | 270.57 | 0.36 |
| X | 70 | 269.25 | 0.80 | 258.62 | 0.69 |
| C | 10 | 286.89 | 0.36 | 288.43 | 0.59 |
| C | 20 | 287.17 | — | 287.90 | — |
| C | 30 | 287.48 | 0.52 | 286.40 | — |
| C | 40 | 286.93 | 0.81 | 284.42 | 0.10 |
| C | 50 | 285.09 | 0.42 | 281.32 | — |
| C | 60 | 282.72 | — | 276.00 | 0.67 |
| C | 70 | 275.30 | 0.42 | 264.72 | — |
| L | 10 | 286.28 | 1.71 | 281.67 | 1.58 |
| L | 20 | 288.57 | 2.00 | 281.87 | 1.21 |
| L | 30 | 287.04 | 1.72 | 278.68 | 1.46 |
| L | 40 | 283.85 | 1.67 | 275.87 | 1.37 |
| L | 50 | 281.91 | 2.11 | 271.98 | 1.31 |
| L | 60 | 272.48 | 1.32 | 268.30 | 1.36 |
| L | 70 | 257.82 | 1.29 | 261.19 | 0.70 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 3.15 | 6.47 | 9.76 | 8.07 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.8 | 31.3 | 29.3 | 27.7 | 26.7 | 25.0 |

Date: 8/3/81

Time: 1055-1125

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 279.73 | 1.17 | 280.23 | — |
| X | 20 | 280.84 | 0.55 | 280.40 | — |
| X | 30 | 280.04 | — | 279.49 | 0.61 |
| X | 40 | 276.71 | — | 273.35 | 1.07 |
| X | 50 | 277.52 | 0.71 | 271.47 | 0.69 |
| X | 60 | 273.76 | 0.36 | 265.23 | 0.70 |
| X | 70 | 271.06 | 0.54 | 259.25 | — |
| C | 10 | 282.07 | 1.03 | 283.12 | — |
| C | 20 | 282.68 | — | 282.82 | 0.22 |
| C | 30 | 282.51 | 0.72 | 281.31 | 0.86 |
| C | 40 | 282.67 | — | 278.87 | 0.43 |
| C | 50 | 281.98 | 0.64 | 275.33 | 0.49 |
| C | 60 | 279.52 | 0.39 | 270.53 | 0.28 |
| C | 70 | 273.57 | — | 262.26 | 0.93 |
| L | 10 | 287.67 | 1.63 | 287.22 | 1.20 |
| L | 20 | 287.56 | 1.23 | 282.96 | 1.39 |
| L | 30 | 285.63 | 1.18 | 280.26 | 1.37 |
| L | 40 | 281.88 | 1.68 | 277.39 | 1.33 |
| L | 50 | 278.12 | 2.06 | 275.22 | 1.28 |
| L | 60 | 271.36 | 1.56 | 270.38 | 0.36 |
| L | 70 | 258.51 | 1.45 | 264.99 | 1.03 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.64 | 2.00 | 4.60 | 6.08 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.7 | 25.5 | 24.7 | 24.0 | 25.0 | 23.8 |

Date: 8/3/81

Time: 1125-1150

Plot No.: 131

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.68 | 0.80 | 278.78 | 0.33 |
| X | 20 | 279.40 | 0.18 | 278.01 | 0.72 |
| X | 30 | 277.19 | 0.34 | 274.23 | 0.93 |
| X | 40 | 275.28 | — | 270.33 | 0.72 |
| X | 50 | 273.43 | 0.50 | 266.62 | 0.93 |
| X | 60 | 270.08 | 0.91 | 259.98 | 0.77 |
| X | 70 | 267.13 | — | 253.26 | — |
| C | 10 | 281.98 | — | 283.08 | 0.10 |
| C | 20 | 282.68 | — | 282.51 | — |
| C | 30 | 282.90 | 0.59 | 280.99 | 0.62 |
| C | 40 | 281.63 | 1.04 | 278.39 | 1.03 |
| C | 50 | 281.01 | — | 275.06 | 0.37 |
| C | 60 | 279.28 | 0.92 | 270.07 | 0.43 |
| C | 70 | 272.60 | — | 260.88 | — |
| L | 10 | 289.38 | 1.91 | 284.25 | 1.42 |
| L | 20 | 290.26 | 1.34 | 283.46 | 1.06 |
| L | 30 | 287.65 | 1.87 | 280.40 | 0.58 |
| L | 40 | 283.93 | 2.25 | 277.55 | 1.21 |
| L | 50 | 279.00 | 1.52 | 276.09 | 1.62 |
| L | 60 | 271.20 | 1.71 | 270.25 | 1.20 |
| L | 70 | 257.62 | 1.31 | 263.48 | 1.13 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.34 | 3.03 | 4.93 | 5.59 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.8 | 25.3 | 24.4 | 23.9 | 25.0 | 23.8 |

Date: 8/4/81

Time: 1050-1120

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 275.06 | 0.57 | 274.45 | — |
| X | 20 | 278.91 | — | 276.48 | — |
| X | 30 | 279.69 | 0.55 | 275.84 | — |
| X | 40 | 277.08 | — | 270.42 | — |
| X | 50 | 278.17 | — | 270.41 | 0.84 |
| X | 60 | 278.24 | — | 270.06 | 0.32 |
| X | 70 | 274.84 | — | 263.80 | 0.28 |
| C | 10 | 275.09 | 0.74 | 276.59 | 0.78 |
| C | 20 | 276.08 | 0.16 | 276.47 | — |
| C | 30 | 277.56 | 0.38 | 275.25 | — |
| C | 40 | 279.17 | — | 274.47 | 0.58 |
| C | 50 | 279.81 | — | 272.28 | — |
| C | 60 | 278.63 | — | 267.78 | 0.97 |
| C | 70 | 273.06 | — | 259.81 | 0.97 |
| L | 10 | 279.72 | 1.88 | 276.38 | 1.47 |
| L | 20 | 280.11 | 1.98 | 272.31 | 1.30 |
| L | 30 | 281.12 | 1.99 | 269.05 | 1.38 |
| L | 40 | 275.50 | 0.99 | 265.28 | 1.45 |
| L | 50 | 273.00 | 1.54 | 263.20 | 1.48 |
| L | 60 | 268.56 | 1.68 | 261.01 | 1.15 |
| L | 70 | 255.39 | 1.72 | 256.94 | 1.61 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 10.42 | 10.39 | 9.96 | 8.10 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.1 | 24.1 | 24.0 | 23.7 | 24.5 | 23.5 |

Date: 8/4/81

Time: -1140

Plot No.: 131

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 277.08 | — | 273.30 | 0.50 |
| X | 20 | 277.32 | 1.06 | 272.47 | 0.52 |
| X | 30 | 272.46 | — | 271.58 | 0.84 |
| X | 40 | 275.57 | — | 268.49 | 0.38 |
| X | 50 | 275.60 | 0.63 | 267.68 | — |
| X | 60 | 271.74 | — | 261.93 | 0.84 |
| X | 70 | 266.80 | 0.56 | 254.15 | 0.79 |
| C | 10 | 275.90 | 0.20 | 277.25 | 0.54 |
| C | 20 | 277.42 | 1.15 | 277.58 | 0.29 |
| C | 30 | 279.28 | 0.85 | 277.36 | — |
| C | 40 | 280.48 | — | 275.37 | — |
| C | 50 | 280.87 | 1.09 | 273.92 | 0.65 |
| C | 60 | 279.81 | — | 272.28 | — |
| C | 70 | 272.90 | 0.96 | 260.60 | 0.53 |
| L | 10 | 279.32 | 1.80 | 272.83 | 1.70 |
| L | 20 | 283.31 | 1.84 | 271.88 | 0.97 |
| L | 30 | 282.27 | 1.30 | 268.13 | 1.42 |
| L | 40 | 279.31 | 1.64 | 266.32 | 0.87 |
| L | 50 | 276.33 | 2.08 | 264.52 | 1.63 |
| L | 60 | 268.46 | 1.54 | 260.78 | 1.48 |
| L | 70 | 255.75 | 1.66 | 258.09 | 0.79 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 10.44 | 10.81 | 9.87 | 8.40 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.9 | 23.8 | 23.9 | 23.6 | 24.5 | 23.5 |

Date: 8/5/81

Time: 1050-1115

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 275.52 | 0.64 | 276.18 | 1.17 |
| X | 20 | 276.59 | 0.91 | 275.23 | 0.74 |
| X | 30 | 281.16 | 1.14 | 277.39 | 1.28 |
| X | 40 | 280.48 | 0.52 | 273.13 | 1.19 |
| X | 50 | 278.24 | — | 269.21 | — |
| X | 60 | 274.28 | 1.26 | 266.87 | 0.40 |
| X | 70 | 274.24 | 1.20 | 263.06 | 0.63 |
| C | 10 | 281.70 | — | 282.84 | 0.58 |
| C | 20 | 282.71 | 0.99 | 282.90 | — |
| C | 30 | 283.78 | 0.43 | 282.43 | 0.91 |
| C | 40 | 284.70 | — | 281.04 | 0.55 |
| C | 50 | 284.42 | 0.55 | 278.02 | — |
| C | 60 | 283.07 | 0.70 | 274.04 | — |
| C | 70 | 275.41 | 0.75 | 265.19 | 0.71 |
| L | 10 | 284.44 | 1.58 | 282.05 | 0.96 |
| L | 20 | 285.03 | 1.45 | 278.75 | 1.12 |
| L | 30 | 286.05 | 1.85 | 280.69 | 1.68 |
| L | 40 | 282.13 | 1.70 | 275.46 | 1.33 |
| L | 50 | 278.32 | 1.37 | 271.54 | 1.34 |
| L | 60 | 273.46 | 1.79 | 268.19 | 0.94 |
| L | 70 | 260.63 | 0.72 | 264.89 | 1.53 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.65 | 6.53 | 7.89 | 6.78 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 31.4 | 26.7 | 25.9 | 24.6 | 24.8 | 23.9 |

Date: 8/5/81

Time: 1115-1145

Plot No.: 131

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 281.56 | 1.21 | 279.75 | 0.28 |
| X | 20 | 282.26 | 0.78 | 279.15 | — |
| X | 30 | 279.37 | 0.86 | 276.12 | 0.46 |
| X | 40 | 282.08 | — | 277.14 | 1.36 |
| X | 50 | 274.92 | — | 267.64 | 0.26 |
| X | 60 | 273.59 | 0.67 | 263.54 | — |
| X | 70 | 270.40 | — | 258.32 | — |
| C | 10 | 282.79 | — | 284.26 | — |
| C | 20 | 283.95 | 0.42 | 284.35 | — |
| C | 30 | 285.33 | 1.12 | 283.80 | 0.64 |
| C | 40 | 284.17 | — | 281.21 | 0.19 |
| C | 50 | 284.26 | 0.77 | 278.17 | 0.50 |
| C | 60 | 285.04 | 0.79 | 276.14 | — |
| C | 70 | 277.67 | — | 264.93 | — |
| L | 10 | 284.26 | 1.34 | 279.52 | 0.96 |
| L | 20 | 289.00 | 1.92 | 279.51 | 1.54 |
| L | 30 | 287.08 | 1.66 | 275.91 | 1.71 |
| L | 40 | 284.25 | 1.70 | 274.29 | 1.14 |
| L | 50 | 280.37 | 1.38 | 271.93 | 1.38 |
| L | 60 | 274.95 | 1.64 | 269.07 | 1.07 |
| L | 70 | 261.35 | 1.56 | 265.34 | 1.17 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 4.90 | 5.77 | 7.73 | 7.56 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 31.5 | 26.4 | 26.1 | 24.8 | 25.1 | 23.9 |

Date: 8/28/81

Time: 1325-1344

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 284.56 | 0.85 | 284.82 | 0.43 |
| X | 20 | 284.81 | 0.94 | 283.63 | 0.59 |
| X | 30 | 284.20 | 0.90 | 281.68 | 0.31 |
| X | 40 | 285.35 | 0.96 | 280.25 | 0.51 |
| X | 50 | 284.90 | 1.06 | 277.05 | 0.43 |
| X | 60 | 284.07 | 0.90 | 275.37 | 0.43 |
| X | 70 | 281.02 | 0.90 | 271.83 | 0.45 |
| C | 10 | 286.65 | 0.98 | 287.98 | 0.36 |
| C | 20 | 287.67 | 0.59 | 287.51 | 0.33 |
| C | 30 | 288.21 | 0.96 | 285.53 | 0.29 |
| C | 40 | 289.85 | 0.38 | 284.02 | 0.31 |
| C | 50 | 289.84 | 0.29 | 280.46 | 0.28 |
| C | 60 | 288.50 | 0.99 | 275.87 | 0.58 |
| C | 70 | 283.48 | 0.21 | 268.33 | 0.35 |
| L | 10 | 287.19 | 1.36 | 285.96 | 1.19 |
| L | 20 | 287.33 | 2.14 | 282.77 | 1.39 |
| L | 30 | 283.37 | 1.69 | 279.37 | 1.38 |
| L | 40 | 281.33 | 1.96 | 278.44 | 1.62 |
| L | 50 | 276.74 | 2.11 | 273.32 | 1.46 |
| L | 60 | 270.64 | 1.87 | 267.92 | 1.53 |
| L | 70 | 257.40 | 1.78 | 258.83 | 1.22 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 0.87 | 1.61 | 3.91 | 4.51 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 32.0 | 35.0 | 33.1 | 29.5 | 26.0 | 23.2 |

Date: 8/28/81

Time: 1350-1408

Plot No.: 131

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 283.83 | 1.05 | 283.24 | 0.48 |
| X | 20 | 283.76 | 0.92 | 281.28 | 0.52 |
| X | 30 | 283.56 | 0.83 | 279.55 | 0.56 |
| X | 40 | 282.51 | 0.93 | 276.51 | 0.64 |
| X | 50 | 280.60 | 0.99 | 274.10 | 0.46 |
| X | 60 | 278.90 | 0.92 | 268.27 | 0.51 |
| X | 70 | 274.80 | 0.48 | 261.59 | 0.39 |
| C | 10 | 286.55 | 0.64 | 287.76 | 0.34 |
| C | 20 | 287.73 | 0.84 | 287.63 | 0.29 |
| C | 30 | 288.61 | 0.81 | 286.49 | 0.31 |
| C | 40 | 289.26 | 0.47 | 285.22 | 0.44 |
| C | 50 | 287.97 | 0.36 | 280.68 | 0.31 |
| C | 60 | 286.04 | 0.82 | 275.62 | 0.38 |
| C | 70 | 281.11 | 0.28 | 266.65 | 0.48 |
| L | 10 | 289.16 | 1.60 | 285.73 | 1.17 |
| L | 20 | 289.10 | 1.79 | 282.18 | 1.39 |
| L | 30 | 287.42 | 1.37 | 281.01 | 1.24 |
| L | 40 | 284.97 | 1.62 | 279.67 | 1.20 |
| L | 50 | 279.87 | 1.70 | 276.22 | 1.60 |
| L | 60 | 273.13 | 1.48 | 269.31 | 1.18 |
| L | 70 | 259.28 | 1.47 | 261.05 | 1.08 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 0.80 | 1.68 | 3.72 | 4.48 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 31.6 | 34.5 | 33.2 | 29.6 | 26.0 | 23.3 |

Date: 9/1/81

Time: 1220-1237

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 270.19 | 0.83 | 269.23 | 0.46 |
| X | 20 | 271.66 | 0.92 | 269.19 | 0.52 |
| X | 30 | 271.19 | 0.88 | 264.32 | 0.49 |
| X | 40 | 272.60 | 0.83 | 262.55 | 0.59 |
| X | 50 | 274.85 | 0.99 | 261.52 | 0.45 |
| X | 60 | 276.11 | 0.77 | 262.17 | 0.42 |
| X | 70 | 273.78 | 0.94 | 260.36 | 0.42 |
| C | 10 | 264.45 | 0.29 | 264.84 | 0.32 |
| C | 20 | 266.45 | 0.32 | 264.07 | 0.34 |
| C | 30 | 269.82 | 0.83 | 263.55 | 0.31 |
| C | 40 | 273.84 | 0.34 | 262.78 | 0.33 |
| C | 50 | 277.44 | 0.89 | 261.63 | 0.32 |
| C | 60 | 279.79 | 0.37 | 260.47 | 0.33 |
| C | 70 | 277.54 | 0.51 | 256.77 | 0.51 |
| L | 10 | 267.86 | 1.49 | 265.39 | 0.91 |
| L | 20 | 269.28 | 1.60 | 261.91 | 1.04 |
| L | 30 | 268.88 | 1.49 | 257.65 | 1.13 |
| L | 40 | 269.25 | 1.33 | 254.76 | 1.30 |
| L | 50 | 268.82 | 1.53 | 253.18 | 1.29 |
| L | 60 | 265.74 | 1.64 | 251.30 | 1.54 |
| L | 70 | 254.95 | 1.52 | 248.57 | 1.60 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 14.34 | 13.23 | 12.61 | 12.08 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.4 | 27.3 | 25.4 | 24.6 | 25.0 | 23.6 |

Date: 9/1/81

Time: 1251-1312

Plot No.: 131

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 271.65 | 0.90 | 270.09 | 0.41 |
| X | 20 | 274.96 | 0.69 | 272.57 | 0.40 |
| X | 30 | 274.68 | 0.90 | 269.62 | 0.37 |
| X | 40 | 276.20 | 0.78 | 268.81 | 0.44 |
| X | 50 | 276.80 | 0.90 | 268.00 | 0.58 |
| X | 60 | 275.74 | 0.86 | 266.50 | 0.61 |
| X | 70 | 272.41 | 1.24 | 261.33 | 1.18 |
| C | 10 | 267.75 | 0.98 | 268.46 | 0.31 |
| C | 20 | 273.09 | 0.26 | 271.52 | 0.34 |
| C | 30 | 276.39 | 0.76 | 272.05 | 0.34 |
| C | 40 | 278.85 | 0.20 | 271.29 | 0.30 |
| C | 50 | 281.32 | 0.58 | 270.20 | 0.55 |
| C | 60 | 280.07 | 0.52 | 267.18 | 0.32 |
| C | 70 | 275.26 | 0.79 | 259.25 | 0.38 |
| L | 10 | 268.70 | 1.79 | 260.46 | 1.26 |
| L | 20 | 276.95 | 2.06 | 262.08 | 1.46 |
| L | 30 | — | — | — | — |
| L | 40 | 275.10 | 1.23 | 258.73 | 1.07 |
| L | 50 | 272.72 | 1.81 | 257.08 | 1.19 |
| L | 60 | 268.37 | 1.54 | 252.87 | 1.03 |
| L | 70 | 255.60 | 1.41 | 247.89 | 1.22 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 13.65 | 12.92 | 12.26 | 11.59 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.7 | 27.8 | 25.6 | 24.8 | 25.0 | 23.9 |

Date: 9/2/81

Time: 1059-1118

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 268.81 | 0.94 | 268.25 | 0.42 |
| X | 20 | 269.31 | 0.88 | 267.89 | 0.49 |
| X | 30 | 269.13 | 1.00 | 263.54 | 0.60 |
| X | 40 | 270.77 | 0.83 | 261.26 | 0.55 |
| X | 50 | 272.65 | 0.87 | 261.05 | 0.48 |
| X | 60 | 272.55 | 0.99 | 259.02 | 0.47 |
| X | 70 | 268.35 | 0.86 | 252.52 | 0.48 |
| C | 10 | 268.42 | 0.56 | 268.72 | 0.27 |
| C | 20 | 269.81 | 0.23 | 267.50 | 0.27 |
| C | 30 | 273.52 | 0.49 | 267.61 | 0.31 |
| C | 40 | 276.58 | 0.70 | 267.02 | 0.25 |
| C | 50 | 279.15 | 0.38 | 264.95 | 0.35 |
| C | 60 | 279.72 | 0.77 | 262.37 | 0.37 |
| C | 70 | 276.03 | 0.41 | 257.64 | 0.30 |
| L | 10 | 272.53 | 1.56 | 271.31 | 0.94 |
| L | 20 | 273.27 | 2.09 | 265.61 | 1.51 |
| L | 30 | 273.10 | 1.52 | 263.67 | 1.43 |
| L | 40 | 270.65 | 1.46 | 260.19 | 1.50 |
| L | 50 | 270.65 | 1.91 | 257.62 | 1.07 |
| L | 60 | 267.16 | 1.63 | 255.50 | 1.65 |
| L | 70 | 255.10 | 1.53 | 251.32 | 0.99 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 12.28 | 11.35 | 11.42 | 11.21 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.5 | 25.5 | 24.3 | 23.6 | 24.8 | 23.4 |

Date: 9/2/81

Time: 1127-1144

Plot No.: 131

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 272.14 | 0.46 | 269.84 | 0.41 |
| X | 20 | 275.73 | 0.92 | 272.98 | 0.50 |
| X | 30 | 276.06 | 1.02 | 271.68 | 0.48 |
| X | 40 | 273.95 | 0.93 | 266.25 | 0.58 |
| X | 50 | 274.15 | 0.62 | 265.23 | 0.56 |
| X | 60 | 272.85 | 1.11 | 261.46 | 0.41 |
| X | 70 | 269.25 | 0.74 | 254.78 | 0.55 |
| C | 10 | 269.38 | 0.40 | 269.72 | 0.35 |
| C | 20 | 272.78 | 0.69 | 270.82 | 0.31 |
| C | 30 | 275.87 | 0.62 | 271.37 | 0.41 |
| C | 40 | 278.28 | 0.26 | 270.37 | 0.32 |
| C | 50 | 279.48 | 0.66 | 269.01 | 0.35 |
| C | 60 | 279.11 | 0.74 | 265.78 | 0.33 |
| C | 70 | 274.36 | 0.62 | 258.15 | 0.38 |
| L | 10 | 274.02 | 1.28 | 264.71 | 1.29 |
| L | 20 | 278.94 | 1.35 | 264.53 | 1.21 |
| L | 30 | 279.34 | 1.67 | 263.26 | 1.62 |
| L | 40 | 276.28 | 1.82 | 261.73 | 1.11 |
| L | 50 | 272.94 | 1.79 | 257.41 | 1.29 |
| L | 60 | 267.51 | 1.82 | 254.12 | 1.51 |
| L | 70 | 253.97 | 1.57 | 248.42 | 1.19 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 11.85 | 11.50 | 11.32 | 11.27 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.7 | 25.8 | 24.3 | 23.5 | 24.5 | 23.3 |

Date: 9/3/81

Time: 1040-1057

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 269.37 | 0.83 | 268.25 | 0.44 |
| X | 20 | 268.52 | 0.87 | 266.29 | 0.55 |
| X | 30 | 270.08 | 0.49 | 264.55 | 0.57 |
| X | 40 | 272.62 | 0.93 | 262.85 | 0.44 |
| X | 50 | 273.22 | 1.11 | 260.77 | 0.49 |
| X | 60 | 273.37 | 0.92 | 258.59 | 0.58 |
| X | 70 | 269.76 | 0.90 | 254.26 | 0.51 |
| C | 10 | 266.97 | 0.64 | 267.80 | 0.35 |
| C | 20 | 269.13 | 0.27 | 267.12 | 0.36 |
| C | 30 | 271.61 | 0.40 | 265.66 | 0.37 |
| C | 40 | 274.46 | 0.71 | 264.24 | 0.24 |
| C | 50 | 276.72 | 0.46 | 261.81 | 0.36 |
| C | 60 | 277.69 | 0.39 | 259.15 | 0.32 |
| C | 70 | 274.25 | 0.38 | 254.16 | 0.38 |
| L | 10 | 274.00 | 1.65 | 270.72 | 1.26 |
| L | 20 | 273.52 | 1.90 | 266.77 | 1.18 |
| L | 30 | 273.62 | 1.77 | 263.01 | 1.40 |
| L | 40 | 271.94 | 1.59 | 261.34 | 1.06 |
| L | 50 | 270.04 | 1.92 | 256.92 | 1.11 |
| L | 60 | 265.27 | 1.75 | 252.39 | 1.14 |
| L | 70 | 254.53 | 1.58 | 249.80 | 1.05 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 9.44 | 10.33 | 10.22 | 10.26 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.9 | 22.5 | 23.2 | 22.9 | 23.5 | 22.9 |

Date: 9/3/81

Time: 1105-1120

Plot No.: 131

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 275.46 | 0.92 | 273.94 | 0.55 |
| X | 20 | 273.20 | 0.84 | 270.03 | 0.42 |
| X | 30 | 272.49 | 1.04 | 266.90 | 0.43 |
| X | 40 | 272.91 | 0.87 | 265.56 | 0.53 |
| X | 50 | 274.64 | 0.87 | 265.38 | 0.43 |
| X | 60 | 271.70 | 0.93 | 259.96 | 0.45 |
| X | 70 | 267.70 | 0.85 | 254.87 | 0.49 |
| C | 10 | 272.82 | 0.24 | 272.91 | 0.31 |
| C | 20 | 275.17 | 0.89 | 273.23 | 0.33 |
| C | 30 | 277.46 | 0.71 | 272.74 | 0.30 |
| C | 40 | 279.41 | 0.25 | 271.88 | 0.37 |
| C | 50 | 280.20 | 0.38 | 269.81 | 0.31 |
| C | 60 | 278.95 | 0.28 | 266.07 | 0.31 |
| C | 70 | 273.29 | 0.28 | 257.62 | 0.29 |
| L | 10 | 276.91 | 1.93 | 268.73 | 1.07 |
| L | 20 | 280.19 | 2.06 | 267.50 | 1.08 |
| L | 30 | 279.41 | 1.58 | 265.61 | 1.44 |
| L | 40 | 276.27 | 1.93 | 262.08 | 1.32 |
| L | 50 | 273.44 | 1.75 | 257.50 | 0.90 |
| L | 60 | 266.78 | 1.46 | 253.39 | 1.11 |
| L | 70 | 253.17 | 1.81 | 246.24 | 1.25 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 8.44 | 10.70 | 10.60 | 10.37 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.4 | 23.3 | 23.3 | 23.0 | 23.8 | 23.1 |

Date: 9/11/81

Time: 1117-1135

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 284.87 | 0.90 | 283.78 | 0.38 |
| X | 20 | 284.27 | 0.77 | 282.50 | 0.58 |
| X | 30 | 286.26 | 0.48 | 281.50 | 0.47 |
| X | 40 | 284.68 | 0.94 | 274.89 | 0.52 |
| X | 50 | 286.14 | 1.05 | 270.88 | 0.41 |
| X | 60 | 284.51 | 0.91 | 267.27 | 0.59 |
| X | 70 | 273.90 | 0.87 | 260.84 | 0.50 |
| C | 10 | 283.08 | 0.30 | 284.40 | 0.29 |
| C | 20 | 284.54 | 0.91 | 283.64 | 0.27 |
| C | 30 | 285.95 | 0.39 | 282.62 | 0.34 |
| C | 40 | 287.40 | 0.35 | 280.05 | 0.29 |
| C | 50 | 287.40 | 0.37 | 275.81 | 0.25 |
| C | 60 | 286.11 | 0.29 | 270.56 | 0.29 |
| C | 70 | 279.35 | 0.39 | 263.81 | 0.36 |
| L | 10 | 279.26 | 1.91 | 277.61 | 0.92 |
| L | 20 | 280.86 | 2.01 | 273.70 | 1.30 |
| L | 30 | 279.39 | 1.68 | 269.57 | 1.49 |
| L | 40 | 276.72 | 1.28 | 264.56 | 1.28 |
| L | 50 | 272.63 | 1.69 | 258.05 | 1.35 |
| L | 60 | 267.40 | 1.79 | 251.81 | 1.54 |
| L | 70 | 255.33 | 1.30 | 241.03 | 1.28 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 2.21 | 4.77 | 6.98 | 7.68 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.6 | 26.3 | 24.3 | 21.7 | 21.5 | 18.9 |

Date: 9/14/81

Time: 1107-1126

Plot No.: 131

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 287.45 | 0.96 | 287.50 | 0.69 |
| X | 20 | 286.55 | 0.84 | 284.09 | 0.53 |
| X | 30 | 281.52 | 0.82 | 276.12 | 0.57 |
| X | 40 | 281.98 | 1.05 | 272.23 | 0.33 |
| X | 50 | 287.12 | 0.96 | 275.19 | 0.34 |
| X | 60 | 283.91 | 0.90 | 264.37 | 0.59 |
| X | 70 | 281.50 | 0.77 | 259.95 | 0.59 |
| C | 10 | 285.75 | 0.67 | 286.92 | 0.29 |
| C | 20 | 286.91 | 0.58 | 285.93 | 0.29 |
| C | 30 | 288.96 | 0.27 | 284.53 | 0.29 |
| C | 40 | 290.60 | 0.59 | 281.16 | 0.28 |
| C | 50 | 292.06 | 0.32 | 276.71 | 0.28 |
| C | 60 | 290.51 | 0.66 | 269.44 | 0.41 |
| C | 70 | 285.24 | 0.21 | 262.23 | 0.37 |
| L | 10 | 283.17 | 2.08 | 281.15 | 1.20 |
| L | 20 | 282.26 | 1.46 | 276.27 | 1.52 |
| L | 30 | 280.83 | 1.47 | 271.89 | 1.11 |
| L | 40 | 277.77 | 1.58 | 267.75 | 1.12 |
| L | 50 | 274.40 | 1.47 | 261.85 | 1.20 |
| L | 60 | 269.18 | 1.73 | 253.98 | 1.29 |
| L | 70 | 256.99 | 1.42 | 243.25 | 1.19 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.26 | 4.70 | 6.57 | 7.15 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.6 | 26.8 | 27.1 | 24.6 | 24.0 | 21.0 |

Date: 9/14/81

Time: 1136-1153

Plot No.: 131

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 289.40 | 0.71 | 288.84 | 0.62 |
| X | 20 | 287.83 | 0.80 | 285.15 | 0.51 |
| X | 30 | 288.19 | 0.98 | 283.21 | 0.40 |
| X | 40 | 287.74 | 0.79 | 279.26 | 0.54 |
| X | 50 | 288.51 | 1.11 | 277.86 | 0.54 |
| X | 60 | 286.47 | 1.06 | 272.54 | 0.52 |
| X | 70 | 282.59 | 1.07 | 270.45 | 0.62 |
| C | 10 | 290.72 | 0.37 | 292.91 | 0.30 |
| C | 20 | 289.31 | 0.37 | 287.74 | 0.28 |
| C | 30 | 291.77 | 0.48 | 286.54 | 0.28 |
| C | 40 | 292.67 | 0.40 | 283.58 | 0.39 |
| C | 50 | 292.95 | 0.65 | 280.62 | 0.32 |
| C | 60 | 291.10 | 0.43 | 275.11 | 0.24 |
| C | 70 | 285.81 | 0.29 | 269.85 | 0.33 |
| L | 10 | 283.64 | 2.09 | 279.77 | 1.55 |
| L | 20 | 283.91 | 1.91 | 277.20 | 1.34 |
| L | 30 | 283.10 | 1.72 | 273.65 | 1.19 |
| L | 40 | 280.51 | 1.81 | 269.70 | 1.43 |
| L | 50 | 277.41 | 1.82 | 265.91 | 1.36 |
| L | 60 | 269.13 | 1.48 | 250.89 | 1.23 |
| L | 70 | 256.58 | 1.85 | 237.92 | 0.98 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.11 | 4.85 | 6.37 | 6.59 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.8 | 27.3 | 27.5 | 24.8 | 24.5 | 21.3 |

Date: 6/24/81

Time: 0900-0925

Plot No.: 161

Field: Soybean* (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 287.40 | — | 285.57 | 0.37 |
| X | 20 | 287.57 | 1.11 | 283.88 | — |
| X | 30 | 288.22 | 0.70 | 281.58 | 0.80 |
| X | 40 | 288.29 | 1.01 | 277.69 | — |
| X | 50 | 287.93 | 0.14 | 273.85 | — |
| X | 60 | 287.20 | 0.91 | 271.09 | — |
| X | 70 | 282.08 | 0.30 | 260.23 | — |
| C | 10 | 283.39 | — | 284.87 | — |
| C | 20 | 284.15 | 0.56 | 283.88 | — |
| C | 30 | 285.53 | — | 281.13 | 0.60 |
| C | 40 | 287.46 | 0.69 | 278.13 | 0.44 |
| C | 50 | 288.83 | 0.27 | 273.74 | — |
| C | 60 | 286.84 | 0.51 | 264.92 | — |
| C | 70 | 273.55 | — | 243.77 | 1.21 |
| L | 10 | 273.48 | — | 270.46 | 1.39 |
| L | 20 | 272.60 | 1.49 | 266.82 | 1.00 |
| L | 30 | 270.58 | 1.41 | 259.57 | 1.24 |
| L | 40 | 269.03 | 1.46 | 251.91 | 1.41 |
| L | 50 | 264.20 | 1.59 | 238.65 | 1.21 |
| L | 60 | 258.02 | 1.62 | 218.85 | 1.33 |
| L | 70 | 235.92 | 1.78 | 178.25 | 1.13 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 3.19 | 9.59 | 11.99 | 12.27 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.5 | 30.2 | 25.8 | 24.8 | 24.5 | 24.4 |

* ~2" tall

Date: 6/24/81

Time: 1040-1105

Plot No.: 161

Field: Soybean* (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 292.52 | 0.45 | 292.19 | 0.69 |
| X | 20 | 292.98 | 0.18 | 290.90 | 0.98 |
| X | 30 | 292.51 | — | 288.07 | — |
| X | 40 | 293.23 | 0.56 | 285.01 | 0.19 |
| X | 50 | 292.54 | 0.76 | 280.70 | 0.41 |
| X | 60 | 289.12 | 1.19 | 273.72 | 0.59 |
| X | 70 | 282.05 | — | 255.95 | 0.20 |
| C | 10 | 292.92 | — | 293.69 | 0.35 |
| C | 20 | 293.27 | 0.89 | 292.25 | 0.81 |
| C | 30 | 293.89 | — | 289.43 | — |
| C | 40 | 295.09 | 0.70 | 286.21 | 0.77 |
| C | 50 | 295.20 | 0.47 | 280.09 | 0.60 |
| C | 60 | 292.39 | 0.47 | 268.60 | 0.68 |
| C | 70 | 282.60 | — | 255.19 | — |
| L | 10 | 275.45 | 3.11 | 273.89 | 1.47 |
| L | 20 | 271.78 | 2.03 | 272.58 | 5.91 |
| L | 30 | 271.15 | 1.59 | 259.47 | 1.35 |
| L | 40 | 270.59 | 1.71 | 250.60 | 1.01 |
| L | 50 | 272.19 | 3.71 | 238.26 | 1.19 |
| L | 60 | 264.54 | 1.81 | 220.55 | 1.49 |
| L | 70 | 248.87 | 1.60 | 185.88 | 1.21 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 3.11 | 8.82 | 12.35 | 13.31 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.4 | 36.3 | 30.2 | 28.1 | 28.0 | 26.2 |

* ~2" tall

Date: 7/13/81

Time: 1020-1049

Plot No.: 161

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 290.03 | 0.29 | 288.09 | 0.85 |
| X | 20 | 290.20 | — | 284.61 | 0.78 |
| X | 30 | 292.35 | 0.51 | 280.94 | 0.25 |
| X | 40 | 293.14 | 1.17 | 273.12 | — |
| X | 50 | 293.50 | 1.00 | 263.70 | 0.58 |
| X | 60 | 290.47 | 0.98 | 256.06 | 0.47 |
| X | 70 | 281.62 | — | 243.02 | 0.58 |
| C | 10 | 283.84 | 0.53 | 283.34 | 0.44 |
| C | 20 | 284.37 | — | 280.15 | 0.37 |
| C | 30 | 286.49 | — | 276.22 | 0.94 |
| C | 40 | 289.29 | — | 270.68 | 0.20 |
| C | 50 | 291.90 | — | 263.70 | — |
| C | 60 | 290.20 | 0.14 | 251.16 | 0.43 |
| C | 70 | 278.69 | — | 227.85 | — |
| L | 10 | 275.36 | 1.43 | 271.74 | 1.44 |
| L | 20 | 274.70 | 1.59 | 267.07 | 1.32 |
| L | 30 | 274.57 | 0.97 | 259.46 | 1.52 |
| L | 40 | 272.64 | 1.28 | 249.88 | 1.54 |
| L | 50 | 272.12 | 1.27 | 238.54 | 0.95 |
| L | 60 | 264.94 | 1.72 | 216.29 | 1.06 |
| L | 70 | 246.75 | 1.33 | 178.52 | 1.03 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.49 | 6.77 | 10.91 | 12.11 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.3 | 35.5 | 33.5 | 31.3 | 30.8 | 27.3 |

Date: 7/14/81

Time: 0907-0931

Plot No.: 161

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 273.05 | 0.82 | 268.11 | 0.57 |
| X | 20 | 277.78 | 1.13 | 268.60 | — |
| X | 30 | 278.73 | 1.07 | 263.36 | 0.65 |
| X | 40 | 283.23 | 0.64 | 258.69 | — |
| X | 50 | 286.10 | 0.26 | 252.59 | 0.82 |
| X | 60 | 288.32 | — | 247.25 | — |
| X | 70 | 280.98 | — | 237.56 | — |
| C | 10 | 273.07 | 0.82 | 271.96 | — |
| C | 20 | 274.78 | 0.58 | 269.78 | — |
| C | 30 | 277.98 | — | 265.96 | — |
| C | 40 | 281.79 | — | 260.15 | 0.63 |
| C | 50 | 285.77 | 0.71 | 252.94 | — |
| C | 60 | 286.93 | 0.51 | 245.95 | 0.38 |
| C | 70 | 276.15 | 0.80 | 223.08 | 0.46 |
| L | 10 | 271.44 | 1.65 | 267.48 | 0.96 |
| L | 20 | 273.27 | 1.92 | 264.36 | 1.16 |
| L | 30 | 272.69 | 1.34 | 257.47 | 1.71 |
| L | 40 | 274.07 | 2.31 | 248.96 | 0.64 |
| L | 50 | 271.29 | 2.11 | 235.08 | 1.49 |
| L | 60 | 265.42 | 1.33 | 213.01 | 0.93 |
| L | 70 | 247.84 | 1.50 | 176.00 | 1.16 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 3.24 | 6.86 | 10.00 | 11.30 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.3 | 30.4 | 31.6 | 27.9 | 27.7 | 26.3 |

Date: 7/21/81

Time: 0911-0938

Plot No.: 161

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 221.37 | 0.80 | 213.68 | 0.68 |
| X | 20 | 224.63 | 1.05 | 208.39 | — |
| X | 30 | 235.50 | 0.71 | 208.72 | 0.70 |
| X | 40 | 243.96 | 0.30 | 200.61 | — |
| X | 50 | 250.69 | — | 187.10 | 0.64 |
| X | 60 | 259.48 | — | 183.01 | 0.46 |
| X | 70 | 263.20 | 0.51 | 180.84 | — |
| C | 10 | 209.86 | 0.41 | 206.98 | — |
| C | 20 | 211.05 | 0.48 | 200.43 | — |
| C | 30 | 218.34 | 0.61 | 194.73 | 0.67 |
| C | 40 | 230.06 | — | 188.40 | — |
| C | 50 | 244.92 | 0.91 | 183.04 | 0.45 |
| C | 60 | 257.87 | — | 176.36 | 0.70 |
| C | 70 | 263.54 | — | 170.87 | 0.25 |
| L | 10 | 219.76 | 1.34 | 208.61 | 1.13 |
| L | 20 | 222.24 | 1.72 | 204.65 | 0.80 |
| L | 30 | 226.73 | 1.86 | 196.49 | 0.88 |
| L | 40 | 231.93 | 1.19 | 188.74 | 1.19 |
| L | 50 | 239.14 | 1.37 | 178.30 | 1.22 |
| L | 60 | 243.28 | — | 157.68 | — |
| L | 70 | 239.07 | 1.68 | 133.82 | 1.32 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 17.20 | 14.89 | 12.11 | 15.18 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.9 | 32.9 | 30.7 | 29.9 | 28.2 | 25.9 |

Date: 7/21/81

Time: 1004-1035

Plot No.: 161

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 232.69 | 0.40 | 226.71 | 0.82 |
| X | 20 | 231.84 | 0.90 | 218.48 | — |
| X | 30 | 234.81 | 0.17 | 213.35 | 0.42 |
| X | 40 | 244.09 | 0.55 | 205.02 | — |
| X | 50 | 254.46 | 0.69 | 199.25 | 0.45 |
| X | 60 | 262.50 | 0.62 | 194.02 | — |
| X | 70 | 266.60 | — | 181.09 | 0.54 |
| C | 10 | 215.30 | — | 213.48 | 0.39 |
| C | 20 | 216.05 | — | 207.28 | 0.47 |
| C | 30 | 222.73 | — | 201.76 | 0.81 |
| C | 40 | 233.84 | — | 194.23 | — |
| C | 50 | 246.71 | — | 184.74 | 0.58 |
| C | 60 | 259.63 | 0.98 | 171.94 | — |
| C | 70 | 270.02 | 0.10 | 168.87 | 0.50 |
| L | 10 | 233.44 | 1.74 | 228.56 | 0.87 |
| L | 20 | 236.63 | 2.28 | 222.73 | 2.08 |
| L | 30 | 241.47 | 2.28 | 213.14 | 1.22 |
| L | 40 | 242.39 | 1.52 | 202.14 | 1.04 |
| L | 50 | 249.41 | 2.25 | 189.87 | 1.52 |
| L | 60 | 255.09 | 3.08 | 169.24 | 2.23 |
| L | 70 | 251.65 | 1.09 | 147.63 | 0.76 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 13.35 | 13.33 | 13.36 | 11.86 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.3 | 31.7 | 30.6 | 31.0 | 29.4 | 26.7 |

Date: 7/22/81

Time: 0850-0918

Plot No.: 161

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 255.81 | — | 253.11 | 1.40 |
| X | 20 | 257.57 | 0.25 | 249.34 | — |
| X | 30 | 260.66 | 0.39 | 243.07 | 0.66 |
| X | 40 | 264.90 | 0.85 | 235.06 | — |
| X | 50 | 268.99 | 0.28 | 220.48 | — |
| X | 60 | 271.40 | — | 212.26 | 0.36 |
| X | 70 | 269.71 | — | 214.60 | 0.95 |
| C | 10 | 243.13 | 0.74 | 239.31 | 0.57 |
| C | 20 | 245.28 | — | 235.06 | 0.53 |
| C | 30 | 251.38 | 0.83 | 230.61 | 0.73 |
| C | 40 | 259.93 | 0.59 | 224.58 | — |
| C | 50 | 267.58 | 0.56 | 217.98 | — |
| C | 60 | 271.60 | — | 208.97 | 1.14 |
| C | 70 | 269.96 | 0.51 | 198.69 | — |
| L | 10 | 249.60 | 1.82 | 244.86 | 1.04 |
| L | 20 | 251.11 | 1.47 | 239.76 | 1.42 |
| L | 30 | 253.68 | 1.93 | 231.43 | 1.28 |
| L | 40 | 255.45 | 1.13 | 222.19 | 1.03 |
| L | 50 | | | | |
| L | 60 | 258.24 | 1.54 | 187.63 | 1.23 |
| L | 70 | 245.79 | 1.31 | 163.44 | 1.12 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.88 | 7.77 | 10.45 | 11.57 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.1 | 25.5 | 24.5 | 24.3 | 24.3 | 23.8 |

Date: 7/22/81

Time: 1036-1100

Plot No.: 161

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 272.00 | 0.80 | 270.10 | 0.58 |
| X | 20 | 271.78 | — | 264.74 | 0.91 |
| X | 30 | 276.29 | 1.00 | 260.68 | 0.82 |
| X | 40 | 280.51 | — | 253.32 | 0.99 |
| X | 50 | 283.40 | — | 242.16 | 0.75 |
| X | 60 | 285.22 | — | 226.65 | 0.92 |
| X | 70 | 280.49 | 0.82 | 207.72 | 0.75 |
| C | 10 | 269.70 | — | 267.95 | 0.45 |
| C | 20 | 269.53 | 0.31 | 263.20 | 0.26 |
| C | 30 | 273.35 | — | 258.71 | 0.79 |
| C | 40 | 277.37 | 1.00 | 250.34 | 0.42 |
| C | 50 | 281.71 | — | 239.58 | 0.95 |
| C | 60 | 284.18 | 0.44 | 226.39 | 0.63 |
| C | 70 | 280.20 | — | 215.67 | 0.90 |
| L | 10 | 261.46 | 2.26 | 259.21 | 1.38 |
| L | 20 | 262.34 | 1.44 | 255.08 | 1.25 |
| L | 30 | 264.04 | 1.38 | 246.08 | 0.68 |
| L | 40 | 265.05 | 1.78 | 236.38 | 1.53 |
| L | 50 | 266.69 | 1.45 | 224.21 | 1.44 |
| L | 60 | 266.46 | 1.67 | 202.93 | 1.49 |
| L | 70 | 257.62 | 1.45 | 177.68 | 0.73 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.02 | 6.39 | 10.76 | 11.86 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.4 | 32.4 | 30.3 | 28.9 | 27.3 | 25.3 |

Date: 7/23/81

Time: 1132-1154

Plot No.: 161

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 289.26 | 0.63 | 287.60 | 0.27 |
| X | 20 | 290.90 | -- | 285.65 | 1.00 |
| X | 30 | 291.98 | 0.10 | 281.80 | 0.97 |
| X | 40 | 295.04 | — | 275.94 | 0.71 |
| X | 50 | 295.46 | — | 268.19 | 0.77 |
| X | 60 | 293.75 | — | 256.80 | — |
| X | 70 | 284.00 | 0.65 | 248.70 | 0.70 |
| C | 10 | 283.27 | 0.52 | 282.87 | 0.48 |
| C | 20 | 284.71 | — | 281.27 | 0.22 |
| C | 30 | 287.70 | — | 277.86 | 0.87 |
| C | 40 | 290.33 | — | 272.49 | 0.52 |
| C | 50 | 292.93 | 0.65 | 265.22 | 0.33 |
| C | 60 | 291.12 | — | 252.19 | — |
| C | 70 | 279.52 | — | 235.92 | 0.54 |
| L | 10 | 270.26 | 1.71 | 266.19 | 1.05 |
| L | 20 | 270.71 | 2.08 | 260.98 | 1.25 |
| L | 30 | 271.91 | 1.68 | 254.89 | 1.42 |
| L | 40 | 271.36 | 1.80 | 243.82 | 0.83 |
| L | 50 | 271.93 | 1.35 | 230.97 | 1.05 |
| L | 60 | 267.72 | 1.55 | 207.16 | 1.35 |
| L | 70 | 250.98 | 1.71 | 180.19 | 1.41 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 3.10 | 6.20 | 9.32 | 12.52 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.2 | 40.9 | 38.1 | 35.1 | 30.3 | 26.8 |

Date: 7/23/81

Time: 1253-1318

Plot No.: 161

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 293.44 | — | 295.20 | 0.33 |
| X | 20 | 294.04 | 0.90 | 291.96 | — |
| X | 30 | 296.22 | 0.96 | 289.23 | 0.75 |
| X | 40 | 297.85 | — | 282.16 | 1.19 |
| X | 50 | 298.44 | 0.33 | 271.33 | 0.63 |
| X | 60 | 298.15 | 0.14 | 256.81 | 0.63 |
| X | 70 | 288.37 | 0.48 | 234.37 | 1.00 |
| C | 10 | 291.50 | 0.84 | 292.93 | 0.53 |
| C | 20 | 291.68 | — | 290.34 | 0.24 |
| C | 30 | 293.51 | 0.60 | 287.47 | 0.96 |
| C | 40 | 296.30 | 1.11 | 282.68 | 0.66 |
| C | 50 | 297.15 | 0.52 | 274.61 | 0.80 |
| C | 60 | 295.15 | 0.30 | 263.26 | — |
| C | 70 | 285.78 | 0.88 | 249.02 | 0.74 |
| L | 10 | 276.70 | 1.42 | 273.26 | 1.42 |
| L | 20 | 274.11 | 1.66 | 265.88 | 1.02 |
| L | 30 | 275.10 | 1.03 | 261.89 | 3.72 |
| L | 40 | 277.58 | 3.47 | 259.23 | 3.86 |
| L | 50 | 274.50 | 1.57 | 238.91 | 1.13 |
| L | 60 | 272.56 | 1.42 | 217.69 | 0.88 |
| L | 70 | 259.64 | 1.39 | 190.70 | 1.00 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 2.31 | 6.97 | 10.03 | 11.80 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.2 | 45.8 | 36.6 | 37.0 | 33.5 | 28.6 |

Date: 8/3/81

Time: 1020-1050

Plot No.: 161

Field: Soybean* (||)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 286.05 | 0.96 | 286.37 | 0.54 |
| X | 20 | 285.95 | 0.91 | 284.13 | 0.94 |
| X | 30 | 286.62 | — | 281.52 | 0.48 |
| X | 40 | 288.38 | 0.38 | 277.89 | — |
| X | 50 | 288.40 | 0.88 | 272.89 | 0.52 |
| X | 60 | 287.34 | — | 262.62 | 0.60 |
| X | 70 | 280.81 | — | 246.07 | — |
| C | 10 | 287.16 | 0.61 | 288.72 | 0.74 |
| C | 20 | 287.76 | 0.86 | 287.27 | — |
| C | 30 | 289.18 | 0.60 | 284.71 | 0.29 |
| C | 40 | 291.26 | — | 281.01 | 0.24 |
| C | 50 | 292.21 | — | 274.15 | — |
| C | 60 | 290.33 | 0.64 | 261.18 | 1.02 |
| C | 70 | 281.07 | 0.43 | 241.11 | 0.82 |
| L | 10 | 279.82 | 1.90 | 277.67 | 1.28 |
| L | 20 | 278.80 | 1.97 | 273.21 | 1.41 |
| L | 30 | 279.96 | 1.32 | 267.23 | 1.69 |
| L | 40 | 278.83 | 1.64 | 260.91 | 1.31 |
| L | 50 | 276.50 | 1.39 | 248.53 | 1.04 |
| L | 60 | 271.14 | 2.08 | 227.63 | 1.36 |
| L | 70 | 255.94 | 1.53 | 197.03 | 1.01 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 3.66 | 5.29 | 9.30 | 9.98 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.6 | 29.4 | 26.6 | 25.9 | 26.2 | 24.5 |

* replanted soybean just coming up.

Date: 8/4/81

Time: 1020-1050

Plot No.: 161

Field: Soybean* (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 250.97 | 0.40 | 249.77 | 0.64 |
| X | 20 | 251.50 | 0.77 | 246.44 | — |
| X | 30 | 255.72 | 0.70 | 240.85 | 0.81 |
| X | 40 | 259.21 | 1.02 | 233.66 | 0.70 |
| X | 50 | 264.01 | — | 223.31 | — |
| X | 60 | 267.25 | 0.37 | 208.09 | — |
| X | 70 | 265.57 | 0.15 | 186.17 | — |
| C | 10 | 235.03 | 0.69 | 237.12 | — |
| C | 20 | 236.62 | — | 233.24 | — |
| C | 30 | 241.74 | 0.16 | 226.22 | — |
| C | 40 | 249.31 | — | 218.32 | 0.81 |
| C | 50 | 259.95 | 0.34 | 205.02 | 1.02 |
| C | 60 | 270.04 | 0.91 | 187.51 | — |
| C | 70 | 273.05 | 1.16 | 171.31 | 0.41 |
| L | 10 | 257.68 | 1.75 | 256.35 | 1.43 |
| L | 20 | 259.28 | 1.43 | 252.44 | 1.36 |
| L | 30 | 260.84 | 1.46 | 244.12 | 1.31 |
| L | 40 | 262.04 | 1.55 | 235.15 | 1.05 |
| L | 50 | 264.38 | 1.60 | 220.04 | 1.46 |
| L | 60 | 264.71 | 1.42 | 194.72 | 1.12 |
| L | 70 | 255.82 | 1.82 | 162.28 | 1.31 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 11.32 | 11.03 | 11.38 | 11.52 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.6 | 27.2 | 26.7 | 26.5 | 26.5 | 24.3 |

* Soybean just coming up

Date: 8/5/81

Time: 1015-1045

Plot No.: 161

Field: Soybean* (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 287.34 | 0.70 | 286.87 | — |
| X | 20 | 285.28 | — | 281.81 | 0.96 |
| X | 30 | 286.43 | 0.80 | 277.40 | 0.63 |
| X | 40 | 287.65 | 0.89 | 273.24 | — |
| X | 50 | 289.32 | — | 261.24 | 0.23 |
| X | 60 | 289.00 | 0.66 | 249.41 | 0.54 |
| X | 70 | 283.69 | — | 231.99 | 0.91 |
| C | 10 | 277.76 | — | 275.37 | 0.49 |
| C | 20 | 277.65 | 1.23 | 271.85 | — |
| C | 30 | 280.46 | 0.92 | 271.07 | 0.56 |
| C | 40 | 284.27 | — | 263.91 | — |
| C | 50 | 288.41 | 0.83 | 253.09 | — |
| C | 60 | 289.58 | 0.28 | 235.97 | — |
| C | 70 | 283.48 | — | 135.19 | — |
| L | 10 | 272.48 | 1.80 | 273.68 | 3.00 |
| L | 20 | 271.42 | 1.33 | 267.07 | 0.70 |
| L | 30 | 274.39 | 2.63 | 258.75 | 1.11 |
| L | 40 | 274.19 | 1.97 | 253.53 | 0.95 |
| L | 50 | 273.48 | 1.87 | 240.51 | 1.28 |
| L | 60 | 269.88 | 1.64 | 217.48 | 1.45 |
| L | 70 | 256.57 | 1.77 | 188.90 | 0.95 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.06 | 8.30 | 10.60 | 11.47 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.9 | 36.2 | 30.8 | 27.9 | 28.8 | 25.3 |

* ~ 1½" tall

Date: 8/28/81

Time: 1111-1130

Plot No.: 161

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 287.86 | 0.90 | 285.74 | 0.47 |
| X | 20 | 288.13 | 1.19 | 283.14 | 0.49 |
| X | 30 | 289.10 | 0.99 | 279.01 | 0.47 |
| X | 40 | 290.04 | 0.90 | 274.29 | 0.49 |
| X | 50 | 291.58 | 0.84 | 269.37 | 0.53 |
| X | 60 | 287.98 | 1.04 | 259.64 | 0.38 |
| X | 70 | 279.84 | 0.66 | 251.16 | 0.45 |
| C | 10 | 284.80 | 0.87 | 285.09 | 0.33 |
| C | 20 | 286.17 | 0.62 | 283.70 | 0.29 |
| C | 30 | 287.82 | 0.30 | 279.55 | 0.27 |
| C | 40 | 289.46 | 0.38 | 274.83 | 0.38 |
| C | 50 | 290.66 | 0.51 | 268.62 | 0.32 |
| C | 60 | 288.53 | 0.36 | 259.34 | 0.24 |
| C | 70 | 280.34 | 0.73 | 250.49 | 0.26 |
| L | 10 | 275.84 | 1.58 | 272.56 | 1.63 |
| L | 20 | 278.61 | 2.13 | 270.08 | 1.36 |
| L | 30 | 278.32 | 1.47 | 265.93 | 1.16 |
| L | 40 | 277.54 | 1.91 | 257.57 | 0.95 |
| L | 50 | 275.70 | 1.40 | 244.45 | 1.23 |
| L | 60 | 269.10 | 1.85 | 223.99 | 1.44 |
| L | 70 | 256.53 | 1.42 | 206.70 | 1.17 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 0.86 | 3.65 | 8.38 | 10.56 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.6 | 42.0 | 30.4 | 26.8 | 25.5 | 22.3 |

Date: 9/1/81

Time: 1156-1216

Plot No.: 161

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 247.13 | 0.81 | 244.04 | 0.54 |
| X | 20 | 248.18 | 0.76 | 242.96 | 0.46 |
| X | 30 | 251.15 | 0.75 | 238.45 | 0.40 |
| X | 40 | 256.78 | 0.91 | 235.89 | 0.41 |
| X | 50 | 260.10 | 0.86 | 229.38 | 0.55 |
| X | 60 | 267.49 | 0.86 | 229.41 | 0.41 |
| X | 70 | 267.15 | 0.83 | 225.35 | 0.73 |
| C | 10 | 224.29 | 0.63 | 224.76 | 0.43 |
| C | 20 | 226.54 | 0.33 | 220.24 | 0.56 |
| C | 30 | 231.82 | 0.38 | 218.31 | 0.30 |
| C | 40 | 240.05 | 0.26 | 216.06 | 0.41 |
| C | 50 | 250.09 | 0.53 | 213.40 | 0.38 |
| C | 60 | 260.16 | 0.81 | 211.61 | 0.38 |
| C | 70 | 266.95 | 0.34 | 217.61 | 0.36 |
| L | 10 | 236.27 | 2.23 | 230.99 | 1.58 |
| L | 20 | 232.77 | 1.49 | 222.63 | 0.95 |
| L | 30 | 238.82 | 1.63 | 216.15 | 0.93 |
| L | 40 | 243.40 | 1.81 | 205.79 | 1.15 |
| L | 50 | 248.33 | 1.33 | 198.05 | 1.21 |
| L | 60 | 254.16 | 1.45 | 183.71 | 1.06 |
| L | 70 | 251.64 | 1.68 | 177.17 | 1.12 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 15.37 | 14.94 | 14.19 | 15.05 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.7 | 26.0 | 26.4 | 26.3 | 26.0 | 23.2 |

Date: 9/1/81

Time: 1322-1343

Plot No.: 161

Field: Soybean (1)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 238.21 | 0.67 | 234.98 | 0.40 |
| X | 20 | 247.78 | 0.87 | 239.53 | 0.40 |
| X | 30 | 251.16 | 0.67 | 237.37 | 0.35 |
| X | 40 | 258.77 | 0.73 | 238.53 | 0.36 |
| X | 50 | 266.97 | 0.80 | 247.44 | 0.51 |
| X | 60 | 269.14 | 0.99 | 246.48 | 0.55 |
| X | 70 | 269.32 | 0.79 | 246.18 | 0.47 |
| C | 10 | 227.90 | 0.20 | 223.62 | 0.44 |
| C | 20 | 227.94 | 0.30 | 218.11 | 0.37 |
| C | 30 | 235.53 | 0.27 | 217.38 | 0.43 |
| C | 40 | 247.16 | 0.26 | 217.28 | 0.36 |
| C | 50 | 258.19 | 0.43 | 216.51 | 0.28 |
| C | 60 | 265.60 | 0.36 | 220.59 | 0.22 |
| C | 70 | 267.56 | 0.24 | 225.79 | 0.41 |
| L | 10 | 241.00 | 2.22 | 233.51 | 1.41 |
| L | 20 | 239.32 | 1.93 | 217.63 | 1.30 |
| L | 30 | — | — | — | — |
| L | 40 | 248.71 | 1.75 | 210.82 | 1.20 |
| L | 50 | 257.13 | 1.44 | 203.85 | 1.16 |
| L | 60 | 254.85 | 1.50 | 187.35 | 1.11 |
| L | 70 | 250.40 | 1.78 | 176.88 | 1.18 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 14.56 | 14.07 | 14.00 | 14.78 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.0 | 26.0 | 26.3 | 25.9 | 26.0 | 23.4 |

Date: 9/2/81

Time: 1037-1056

Plot No.: 161

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 256.22 | 0.94 | 254.01 | 0.46 |
| X | 20 | 256.96 | 0.70 | 250.98 | 0.47 |
| X | 30 | 259.79 | 0.80 | 249.07 | 0.47 |
| X | 40 | 264.30 | 0.97 | 243.83 | 0.51 |
| X | 50 | 269.65 | 1.02 | 244.12 | 0.46 |
| X | 60 | 270.95 | 0.97 | 232.38 | 0.49 |
| X | 70 | 270.91 | 0.83 | 223.97 | 0.43 |
| C | 10 | 233.64 | 0.23 | 233.29 | 0.39 |
| C | 20 | 234.29 | 0.32 | 230.02 | 0.34 |
| C | 30 | 240.30 | 0.40 | 228.71 | 0.29 |
| C | 40 | 247.72 | 0.17 | 226.44 | 0.37 |
| C | 50 | 256.19 | 0.72 | 224.62 | 0.35 |
| C | 60 | 264.98 | 0.30 | 223.90 | 0.27 |
| C | 70 | 269.04 | 0.37 | 227.94 | 0.32 |
| L | 10 | 246.70 | 1.89 | 243.88 | 1.24 |
| L | 20 | 248.06 | 1.85 | 238.90 | 1.17 |
| L | 30 | 250.70 | 1.83 | 231.72 | 0.94 |
| L | 40 | 253.56 | 1.46 | 223.11 | 0.96 |
| L | 50 | 257.82 | 1.32 | 213.63 | 1.41 |
| L | 60 | 259.70 | 1.70 | 205.86 | 1.28 |
| L | 70 | 254.41 | 1.50 | 198.95 | 1.14 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 12.69 | 12.34 | 13.17 | 13.26 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.1 | 26.0 | 24.0 | 23.3 | 23.8 | 22.9 |

Date: 9/2/81

Time: 1154-1210

Plot No.: 161

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 252.20 | 0.82 | 248.05 | 0.98 |
| X | 20 | 249.42 | 0.91 | 243.63 | 0.60 |
| X | 30 | 253.82 | 0.85 | 244.45 | 0.40 |
| X | 40 | 261.07 | 0.74 | 248.70 | 0.34 |
| X | 50 | 265.40 | 0.87 | 247.93 | 0.40 |
| X | 60 | 267.10 | 0.80 | 247.40 | 0.59 |
| X | 70 | 267.00 | 0.96 | 246.10 | 0.47 |
| C | 10 | 241.96 | 0.23 | 238.70 | 0.28 |
| C | 20 | 245.31 | 0.36 | 238.10 | 0.30 |
| C | 30 | 249.44 | 0.85 | 235.03 | 0.38 |
| C | 40 | 255.58 | 0.29 | 233.77 | 0.31 |
| C | 50 | 262.17 | 0.27 | 231.82 | 0.38 |
| C | 60 | 267.83 | 0.36 | 232.76 | 0.35 |
| C | 70 | 267.85 | 0.37 | 235.65 | 0.32 |
| L | 10 | 246.37 | 2.06 | 237.73 | 1.30 |
| L | 20 | 253.77 | 2.24 | 236.37 | 1.14 |
| L | 30 | 252.69 | 1.63 | 232.97 | 1.20 |
| L | 40 | 256.38 | 1.57 | 224.24 | 1.14 |
| L | 50 | 259.18 | 1.28 | 212.00 | 1.06 |
| L | 60 | 258.42 | 1.57 | 194.73 | 1.22 |
| L | 70 | 251.18 | 1.41 | 181.14 | 1.03 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 12.94 | 13.39 | 13.38 | 13.82 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.0 | 25.0 | 24.6 | 24.1 | 25.0 | 23.9 |

Date: 9/3/81

Time: 1020-1040

Plot No.: 161

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 253.90 | 0.83 | 253.19 | 0.52 |
| X | 20 | 253.05 | 0.61 | 250.03 | 0.57 |
| X | 30 | 257.26 | 0.94 | 250.21 | 0.45 |
| X | 40 | 259.46 | 0.94 | 246.88 | 0.51 |
| X | 50 | 265.03 | 0.85 | 246.10 | 0.43 |
| X | 60 | 267.88 | 0.72 | 240.89 | 0.50 |
| X | 70 | 269.27 | 0.81 | 236.28 | 0.57 |
| C | 10 | 244.44 | 0.25 | 244.56 | 0.39 |
| C | 20 | 245.96 | 0.64 | 241.88 | 0.31 |
| C | 30 | 249.97 | 0.23 | 239.27 | 0.29 |
| C | 40 | 256.69 | 0.84 | 237.71 | 0.39 |
| C | 50 | 264.14 | 0.21 | 235.78 | 0.39 |
| C | 60 | 269.35 | 0.33 | 234.84 | 0.26 |
| C | 70 | 270.43 | 0.26 | 235.11 | 0.36 |
| L | 10 | 253.04 | 1.66 | 250.01 | 1.64 |
| L | 20 | 251.45 | 1.77 | 244.23 | 1.27 |
| L | 30 | 255.64 | 1.46 | 238.65 | 1.17 |
| L | 40 | 255.47 | 1.30 | 226.84 | 0.93 |
| L | 50 | 259.21 | 1.27 | 216.87 | 1.14 |
| L | 60 | 261.93 | 1.37 | 211.07 | 0.91 |
| L | 70 | 255.80 | 1.49 | 200.56 | 1.39 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 10.35 | 11.72 | 12.05 | 12.65 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.2 | 23.5 | 23.8 | 23.4 | 24.0 | 22.8 |

Date: 9/3/81

Time: 1130-1150

Plot No.: 161

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 249.25 | 0.76 | 245.81 | 0.49 |
| X | 20 | 256.67 | 0.76 | 251.95 | 0.39 |
| X | 30 | 257.20 | 0.92 | 245.42 | 0.70 |
| X | 40 | 261.35 | 0.75 | 242.05 | 0.48 |
| X | 50 | 266.73 | 1.15 | 240.21 | 0.51 |
| X | 60 | 268.35 | 0.91 | 249.24 | 0.34 |
| X | 70 | 266.38 | 0.84 | 247.44 | 0.47 |
| C | 10 | 250.84 | 0.76 | 247.27 | 0.39 |
| C | 20 | 252.26 | 0.32 | 245.25 | 0.36 |
| C | 30 | 258.46 | 0.24 | 247.93 | 0.34 |
| C | 40 | 263.32 | 0.28 | 245.62 | 0.35 |
| C | 50 | 268.04 | 0.87 | 243.65 | 0.28 |
| C | 60 | 270.56 | 0.64 | 241.45 | 0.31 |
| C | 70 | 268.58 | 0.28 | 241.48 | 0.32 |
| L | 10 | 254.40 | 1.82 | 248.47 | 1.48 |
| L | 20 | 257.07 | 1.57 | 244.54 | 1.02 |
| L | 30 | 259.27 | 1.48 | 237.72 | 1.33 |
| L | 40 | 260.48 | 1.47 | 230.97 | 1.03 |
| L | 50 | 264.44 | 2.28 | 221.36 | 1.23 |
| L | 60 | 260.50 | 1.77 | 203.49 | 1.11 |
| L | 70 | 252.43 | 1.94 | 187.20 | 1.09 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 9.47 | 11.41 | 12.30 | 12.78 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.0 | 25.0 | 24.6 | 24.2 | 24.8 | 23.4 |

Date: 9/11/81

Time: 1054-1111

Plot No.: 161

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 277.00 | 1.01 | 277.61 | 0.44 |
| X | 20 | 276.97 | 0.86 | 276.46 | 0.58 |
| X | 30 | 276.84 | 0.77 | 274.64 | 0.39 |
| X | 40 | 277.60 | 0.87 | 273.83 | 0.49 |
| X | 50 | 279.86 | 1.06 | 273.07 | 0.33 |
| X | 60 | 278.71 | 1.12 | 269.08 | 0.41 |
| X | 70 | 273.76 | 0.93 | 263.58 | 0.53 |
| C | 10 | 275.28 | 0.38 | 276.10 | 0.34 |
| C | 20 | 276.32 | 0.69 | 275.47 | 0.39 |
| C | 30 | 277.35 | 0.37 | 274.69 | 0.32 |
| C | 40 | 279.62 | 0.30 | 273.27 | 0.37 |
| C | 50 | 280.34 | 0.74 | 271.14 | 0.27 |
| C | 60 | 280.31 | 0.66 | 268.79 | 0.32 |
| C | 70 | 276.37 | 0.40 | 265.71 | 0.28 |
| L | 10 | 275.04 | 1.76 | 273.13 | 1.09 |
| L | 20 | 276.16 | 1.63 | 270.55 | 1.11 |
| L | 30 | 276.76 | 1.51 | 266.34 | 0.83 |
| L | 40 | 276.67 | 1.88 | 262.30 | 1.10 |
| L | 50 | 275.41 | 2.96 | 255.87 | 1.50 |
| L | 60 | 271.27 | 2.11 | 248.90 | 1.14 |
| L | 70 | 261.03 | 1.63 | 246.12 | 1.41 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

0-0.50 cm 0-2.50 cm 2.5-5.0 cm 5-10 cm

Soil Temperature Data (°C)

Ambient +2.5 cm 1.25 cm 2.5 cm 7.5 cm 15.0 cm

Date: 9/11/81

Time: 1142-1159

Plot No.: 161

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 279.34 | 0.84 | 279.14 | 0.45 |
| X | 20 | 279.62 | 0.90 | 278.72 | 0.53 |
| X | 30 | 279.99 | 0.82 | 277.20 | 0.51 |
| X | 40 | 277.45 | 0.83 | 271.15 | 0.46 |
| X | 50 | 274.87 | 1.03 | 265.91 | 0.41 |
| X | 60 | 277.77 | 0.53 | 263.39 | 0.87 |
| X | 70 | 273.00 | 0.91 | 264.40 | 0.52 |
| C | 10 | 280.31 | 0.67 | 281.50 | 0.31 |
| C | 20 | 280.37 | 0.54 | 280.50 | 0.32 |
| C | 30 | 281.96 | 0.33 | 279.24 | 0.39 |
| C | 40 | 282.92 | 0.53 | 277.93 | 0.28 |
| C | 50 | 282.92 | 0.87 | 275.34 | 0.26 |
| C | 60 | 280.13 | 0.71 | 271.20 | 0.33 |
| C | 70 | 271.85 | 0.54 | 265.28 | 0.30 |
| L | 10 | 278.31 | 1.90 | 274.97 | 1.34 |
| L | 20 | 278.49 | 2.39 | 271.63 | 1.44 |
| L | 30 | 278.12 | 1.78 | 267.18 | 1.43 |
| L | 40 | 276.63 | 1.90 | 262.25 | 1.43 |
| L | 50 | 275.59 | 1.40 | 258.08 | 1.12 |
| L | 60 | 271.67 | 1.60 | 246.93 | 1.41 |
| L | 70 | 258.10 | 1.53 | 239.95 | 1.18 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

0-0.50 cm 0-2.50 cm 2.5-5.0 cm 5-10 cm

Soil Temperature Data (°C)

Ambient +2.5 cm 1.25 cm 2.5 cm 7.5 cm 15.0 cm

Date: 9/14/81

Time: 1046-1104

Plot No.: 161

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.55 | 0.89 | 281.03 | 0.58 |
| X | 20 | 280.09 | 0.86 | 279.97 | 0.51 |
| X | 30 | 279.69 | 0.48 | 278.11 | 0.46 |
| X | 40 | 277.93 | 0.99 | 275.04 | 0.51 |
| X | 50 | 273.47 | 0.89 | 268.57 | 0.43 |
| X | 60 | 271.72 | 1.04 | 261.44 | 0.40 |
| X | 70 | 271.54 | 0.89 | 259.07 | 0.43 |
| C | 10 | 282.68 | 0.55 | 283.51 | 0.36 |
| C | 20 | 283.55 | 0.38 | 282.38 | 0.33 |
| C | 30 | 284.77 | 0.36 | 281.21 | 0.45 |
| C | 40 | 286.15 | 0.35 | 279.41 | 0.28 |
| C | 50 | 286.42 | 0.37 | 276.20 | 0.36 |
| C | 60 | 285.41 | 0.72 | 273.69 | 0.27 |
| C | 70 | 279.16 | 0.35 | 269.14 | 0.32 |
| L | 10 | 281.79 | 3.76 | 277.95 | 1.39 |
| L | 20 | 278.72 | 1.84 | 274.73 | 1.30 |
| L | 30 | 277.84 | 1.54 | 275.07 | 1.32 |
| L | 40 | 275.91 | 1.48 | 264.35 | 1.24 |
| L | 50 | 274.65 | 2.01 | 258.70 | 1.32 |
| L | 60 | 270.91 | 1.80 | 250.19 | 1.15 |
| L | 70 | 261.59 | 1.60 | 242.83 | 0.91 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 2.76 | 6.11 | 8.02 | 8.37 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.7 | 23.8 | 25.9 | 23.1 | 22.5 | 20.4 |

Date: 9/14/81

Time: 1157-1223

Plot No.: 161

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.32 | 0.95 | 280.24 | 0.41 |
| X | 20 | 280.32 | 1.02 | 279.39 | 0.48 |
| X | 30 | 280.19 | 0.52 | 277.97 | 0.39 |
| X | 40 | 280.08 | 0.92 | 276.49 | 0.47 |
| X | 50 | 279.80 | 0.89 | 274.73 | 0.49 |
| X | 60 | 278.71 | 0.91 | 271.58 | 0.46 |
| X | 70 | 275.56 | 0.84 | 267.54 | 0.51 |
| C | 10 | 285.91 | 0.55 | 289.45 | 0.31 |
| C | 20 | 285.01 | 0.68 | 286.45 | 0.35 |
| C | 30 | 284.34 | 0.75 | 284.03 | 0.32 |
| C | 40 | 284.69 | 0.58 | 282.85 | 0.36 |
| C | 50 | 284.15 | 0.29 | 280.97 | 0.32 |
| C | 60 | 281.20 | 0.28 | 276.63 | 0.34 |
| C | 70 | 275.03 | 0.33 | 271.16 | 0.28 |
| L | 10 | 281.35 | 1.80 | 276.26 | 1.06 |
| L | 20 | 280.89 | 1.58 | 273.54 | 1.17 |
| L | 30 | 279.56 | 2.03 | 271.12 | 1.42 |
| L | 40 | 277.65 | 2.07 | 266.66 | 1.72 |
| L | 50 | 275.57 | 2.10 | 259.80 | 1.40 |
| L | 60 | 269.76 | 2.34 | 249.95 | 1.32 |
| L | 70 | 258.57 | 1.75 | 242.00 | 1.13 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 1.89 | 5.20 | 7.61 | 8.57 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.4 | 27.5 | 28.1 | 24.3 | 24.5 | 21.0 |

APPENDIX E
RADIOMETRIC DATA FROM TEST SITE NO. 2

Date: 6/29/81

Time: 0914-0949

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.81 | 0.62 | 278.96 | 0.27 |
| X | 20 | 281.37 | — | 276.21 | 0.31 |
| X | 30 | 282.55 | — | 272.06 | — |
| X | 40 | 283.80 | — | 264.41 | 1.30 |
| X | 50 | 285.39 | 0.62 | 254.62 | 0.60 |
| X | 60 | 285.17 | 0.20 | 248.61 | — |
| X | 70 | 281.40 | 0.42 | 236.09 | — |
| C | 10 | 269.78 | — | 269.41 | — |
| C | 20 | 271.70 | 0.74 | 266.80 | — |
| C | 30 | 276.52 | 0.13 | 264.88 | 0.27 |
| C | 40 | 280.88 | 0.97 | 258.44 | — |
| C | 50 | 284.24 | 1.14 | 249.42 | — |
| C | 60 | 283.56 | 0.21 | 235.88 | 1.05 |
| C | 70 | 269.71 | 0.65 | 212.03 | — |
| L | 10 | 262.47 | 1.33 | 260.79 | 1.38 |
| L | 20 | 260.08 | 1.56 | 253.19 | 1.60 |
| L | 30 | 260.88 | 1.56 | 245.61 | 1.41 |
| L | 40 | 261.00 | 1.64 | 233.55 | 1.24 |
| L | 50 | 260.17 | 1.76 | 218.29 | 0.70 |
| L | 60 | 255.81 | 1.22 | 193.89 | 0.87 |
| L | 70 | 248.52 | 1.59 | 166.40 | 0.87 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.15 | 10.80 | 13.95 | 15.43 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.8 | 23.4 | 26.0 | 23.3 | 23.3 | 21.0 |

Date: 7/30/81

Time: 1252-1311

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 264.09 | 0.54 | 261.95 | — |
| X | 20 | 266.65 | — | 258.69 | 0.16 |
| X | 30 | 272.08 | 0.39 | 254.57 | 0.16 |
| X | 40 | 277.25 | 1.09 | 248.93 | 1.00 |
| X | 50 | 281.22 | — | 236.51 | — |
| X | 60 | 284.83 | 1.13 | 226.29 | — |
| X | 70 | 278.38 | 0.53 | 205.98 | 0.81 |
| C | 10 | 262.68 | 0.52 | 260.94 | 0.59 |
| C | 20 | 263.27 | — | 256.06 | 0.58 |
| C | 30 | 268.08 | — | 250.89 | 0.34 |
| C | 40 | 274.78 | — | 242.82 | — |
| C | 50 | 281.52 | 0.55 | 229.41 | — |
| C | 60 | 284.50 | — | 211.44 | 0.12 |
| C | 70 | 274.07 | 0.52 | 186.92 | 0.40 |
| L | 10 | 256.40 | 1.48 | 250.67 | 1.05 |
| L | 20 | 256.54 | 1.66 | 244.66 | 1.45 |
| L | 30 | 258.87 | 1.95 | 238.86 | 1.03 |
| L | 40 | 259.92 | 1.37 | 227.65 | 0.71 |
| L | 50 | 261.44 | 1.29 | 211.16 | 1.15 |
| L | 60 | 261.79 | 1.30 | 187.23 | 0.90 |
| L | 70 | 245.32 | 1.77 | 154.30 | 1.03 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 7.12 | 9.75 | 15.37 | 18.22 |

Soil Temperature Data (°C)

| Ambient | Surface +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|--------------------|---------|--------|--------|---------|
| 28.9 | 39.6 | 27.8 | 26.9 | 27.0 | 23.6 |

Date: 7/31/81

Time: 0906-0927

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 267.16 | 0.62 | 265.25 | 0.73 |
| X | 20 | 271.18 | — | 265.21 | 0.98 |
| X | 30 | 273.14 | 0.35 | 261.25 | 0.86 |
| X | 40 | 274.06 | 1.01 | 253.35 | 0.42 |
| X | 50 | 276.64 | 0.68 | 249.08 | 0.46 |
| X | 60 | 277.44 | — | 235.52 | 0.89 |
| X | 70 | 269.29 | 1.05 | 215.07 | — |
| C | 10 | 253.98 | 0.85 | 252.97 | 0.83 |
| C | 20 | 256.92 | 0.53 | 250.77 | 0.52 |
| C | 30 | 260.92 | 0.45 | 243.86 | 0.64 |
| C | 40 | 267.19 | 0.79 | 234.14 | 0.46 |
| C | 50 | 273.76 | 0.95 | 220.89 | 0.12 |
| C | 60 | 277.49 | — | 202.54 | 1.02 |
| C | 70 | 268.49 | 0.34 | 174.77 | 0.44 |
| L | 10 | 252.83 | 1.12 | 246.30 | 1.35 |
| L | 20 | 256.64 | 0.89 | 244.63 | 1.13 |
| L | 30 | 256.45 | 1.92 | 237.53 | 1.17 |
| L | 40 | 257.83 | 1.81 | 225.21 | 1.29 |
| L | 50 | 258.60 | 2.00 | 211.88 | 1.25 |
| L | 60 | 255.85 | 1.64 | 187.90 | 1.06 |
| L | 70 | 240.35 | 1.73 | 151.99 | 0.90 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 9.99 | 14.72 | 18.50 | 19.10 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.9 | 28.0 | 21.6 | 20.2 | 20.8 | 19.5 |

Date: 8/10/81

Time: 0913-0935

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 275.05 | 1.06 | 272.80 | 0.50 |
| X | 20 | 276.75 | 0.58 | 269.71 | 0.39 |
| X | 30 | 278.64 | 1.07 | 265.39 | 0.28 |
| X | 40 | 280.42 | — | 257.05 | 0.92 |
| X | 50 | 282.54 | 0.34 | 245.92 | 0.52 |
| X | 60 | 283.04 | 0.34 | 228.02 | 0.49 |
| X | 70 | 275.37 | 0.65 | 216.48 | 0.43 |
| C | 10 | 269.30 | 0.72 | 268.94 | 1.00 |
| C | 20 | 270.80 | — | 264.91 | 0.91 |
| C | 30 | 273.96 | 0.36 | 258.75 | 0.98 |
| C | 40 | 277.71 | 1.06 | 251.04 | 0.20 |
| C | 50 | 282.17 | 0.41 | 238.03 | — |
| C | 60 | 282.43 | — | 220.47 | 0.73 |
| C | 70 | 271.76 | 0.43 | 196.57 | 0.56 |
| L | 10 | 261.29 | 1.65 | 255.48 | 1.30 |
| L | 20 | 265.22 | 1.90 | 255.82 | 1.26 |
| L | 30 | 263.90 | 2.23 | 246.12 | 1.57 |
| L | 40 | 263.71 | 1.87 | 234.84 | 1.24 |
| L | 50 | 261.96 | 1.55 | 218.39 | 1.18 |
| L | 60 | 256.62 | 1.85 | 194.58 | 1.29 |
| L | 70 | 242.45 | 1.62 | 161.63 | 1.01 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 8.47 | 11.38 | 16.09 | 17.08 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.6 | 27.3 | 24.6 | 23.3 | 23.8 | 22.6 |

Date: 8/11/81

Time: 0905-0933

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 267.39 | 0.14 | 263.84 | 0.65 |
| X | 20 | 271.53 | 0.82 | 263.44 | 0.90 |
| X | 30 | 279.83 | 1.27 | 269.96 | — |
| X | 40 | 273.06 | 0.57 | 245.80 | 0.57 |
| X | 50 | 277.86 | 0.81 | 241.49 | 0.25 |
| X | 60 | 278.38 | 0.72 | 229.27 | 0.71 |
| X | 70 | 272.22 | 0.32 | 218.91 | 0.41 |
| C | 10 | 263.61 | 1.01 | 262.78 | 0.15 |
| C | 20 | 265.81 | — | 259.41 | 0.18 |
| C | 30 | 269.01 | 0.41 | 251.94 | 0.53 |
| C | 40 | 274.16 | 0.55 | 245.64 | — |
| C | 50 | 278.83 | 0.25 | 234.18 | 0.75 |
| C | 60 | 280.23 | — | 214.15 | 0.76 |
| C | 70 | 270.98 | — | 189.72 | 0.56 |
| L | 10 | 263.34 | 1.55 | 258.35 | 1.33 |
| L | 20 | 267.96 | 1.72 | 257.16 | 1.77 |
| L | 30 | 268.50 | 1.68 | 250.79 | 1.26 |
| L | 40 | 268.03 | 1.28 | 240.68 | 1.46 |
| L | 50 | 266.54 | 1.95 | 226.84 | 1.10 |
| L | 60 | 260.37 | 1.46 | 201.68 | 1.17 |
| L | 70 | 243.55 | 1.90 | 168.06 | 0.88 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.03 | 10.17 | 15.20 | 16.60 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.7 | 27.3 | 25.2 | 24.7 | 25.5 | 23.9 |

Date: 8/13/81

Time: 0838-0859

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 213.46 | 0.64 | 206.21 | 0.75 |
| X | 20 | 212.61 | 0.91 | 194.71 | 0.30 |
| X | 30 | 219.07 | 0.17 | 188.55 | 0.74 |
| X | 40 | 228.52 | — | 183.14 | — |
| X | 50 | 240.10 | 0.46 | 176.46 | 0.60 |
| X | 60 | 249.72 | — | 175.72 | 0.34 |
| X | 70 | 252.00 | — | 156.68 | 0.47 |
| C | 10 | 190.90 | 0.45 | 189.52 | 0.65 |
| C | 20 | 196.13 | 0.78 | 185.81 | 0.67 |
| C | 30 | 203.53 | 0.16 | 179.00 | 0.49 |
| C | 40 | 214.36 | 0.32 | 170.84 | — |
| C | 50 | 229.27 | 0.44 | 160.77 | 0.60 |
| C | 60 | 242.43 | — | 145.51 | 0.67 |
| C | 70 | 248.36 | 0.85 | 145.82 | 1.25 |
| L | 10 | 204.38 | 1.42 | 194.51 | 1.37 |
| L | 20 | 205.48 | 1.58 | 188.06 | 0.85 |
| L | 30 | 209.76 | 1.44 | 179.12 | 1.00 |
| L | 40 | 215.77 | 1.14 | 168.33 | 0.86 |
| L | 50 | 224.23 | 1.45 | 154.91 | 0.88 |
| L | 60 | 230.16 | 1.56 | 131.70 | 1.42 |
| L | 70 | 232.53 | 1.55 | 109.52 | 1.30 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 23.98 | 20.01 | 19.82 | 20.48 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.3 | 21.5 | 20.0 | 19.6 | 21.1 | 20.2 |

Date: 8/13/81

Time: 1342-1400

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 230.83 | 1.11 | 225.46 | — |
| X | 20 | 237.00 | 0.51 | 224.98 | 0.66 |
| X | 30 | 235.37 | 0.64 | 210.86 | 0.63 |
| X | 40 | | | | |
| X | 50 | 253.90 | 0.23 | 198.35 | — |
| X | 60 | 260.88 | 0.47 | 167.40 | 0.62 |
| X | 70 | 265.45 | — | 159.62 | 0.59 |
| C | 10 | 211.29 | — | 210.96 | 0.44 |
| C | 20 | 214.77 | 0.45 | 205.58 | 0.44 |
| C | 30 | 222.88 | 0.69 | 198.31 | 0.52 |
| C | 40 | 234.30 | 0.42 | 188.23 | 0.34 |
| C | 50 | 247.24 | — | 180.53 | 0.42 |
| C | 60 | 262.18 | 0.98 | 165.74 | 0.66 |
| C | 70 | 266.74 | 0.98 | 153.58 | 0.63 |
| L | 10 | 225.26 | 1.55 | 217.68 | 1.45 |
| L | 20 | 225.61 | 1.69 | 211.24 | 1.72 |
| L | 30 | 227.28 | 1.57 | 198.52 | 0.91 |
| L | 40 | 231.44 | 1.65 | 186.09 | 1.02 |
| L | 50 | 238.41 | 2.05 | 176.71 | 0.89 |
| L | 60 | 244.22 | 1.58 | 152.60 | 1.08 |
| L | 70 | 240.08 | 1.71 | 127.06 | 3.20 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 18.88 | 18.03 | 19.24 | 20.48 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.8 | 27.5 | 28.9 | 27.6 | 29.5 | 25.0 |

Date: 8/14/81

Time: 0835-0902

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 231.24 | — | 224.66 | 0.62 |
| X | 20 | 240.13 | 0.47 | 229.23 | — |
| X | 30 | 240.04 | — | 218.58 | — |
| X | 40 | 253.29 | 0.34 | 224.08 | — |
| X | 50 | 257.19 | 0.60 | 213.23 | 0.64 |
| X | 60 | 257.88 | 0.95 | 194.67 | 0.69 |
| X | 70 | 257.07 | 0.40 | 183.18 | 0.78 |
| C | 10 | 213.35 | 0.28 | 212.45 | 0.41 |
| C | 20 | 217.87 | 0.93 | 207.40 | 0.48 |
| C | 30 | 224.68 | — | 200.86 | 0.25 |
| C | 40 | 233.68 | — | 195.22 | 0.60 |
| C | 50 | 246.51 | — | 184.16 | 0.77 |
| C | 60 | 257.04 | 0.54 | 169.15 | 0.48 |
| C | 70 | 259.79 | — | 155.35 | 0.20 |
| L | 10 | 223.50 | 0.96 | 216.89 | 0.81 |
| L | 20 | 227.35 | 1.42 | 212.67 | 0.96 |
| L | 30 | 230.07 | 1.35 | 200.00 | 0.96 |
| L | 40 | 233.91 | 1.54 | 194.68 | 1.04 |
| L | 50 | 241.02 | 0.98 | 178.97 | 1.15 |
| L | 60 | 243.98 | 1.32 | 153.07 | 1.19 |
| L | 70 | 240.24 | 2.21 | 126.76 | 6.39 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 17.03 | 19.00 | 18.54 | 19.27 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.3 | 22.3 | 21.3 | 20.6 | 21.9 | 22.1 |

Date: 8/14/81

Time: 1337-1401

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 268.50 | — | 265.53 | 0.48 |
| X | 20 | 264.71 | — | 256.88 | 0.44 |
| X | 30 | 268.13 | 1.34 | 254.17 | 0.57 |
| X | 40 | 272.39 | 0.69 | 249.40 | 1.02 |
| X | 50 | 274.73 | — | 237.52 | — |
| X | 60 | 276.09 | — | 224.55 | 0.34 |
| X | 70 | 272.41 | — | 206.77 | 0.69 |
| C | 10 | 247.06 | 0.71 | 246.22 | 0.39 |
| C | 20 | 249.91 | 0.40 | 241.69 | — |
| C | 30 | 255.32 | 0.86 | 235.91 | 1.02 |
| C | 40 | 263.56 | — | 228.13 | — |
| C | 50 | 273.21 | 0.65 | 217.60 | 0.66 |
| C | 60 | 280.01 | 0.37 | 202.83 | — |
| C | 70 | 276.14 | 0.29 | 185.83 | 0.34 |
| L | 10 | 246.37 | 1.47 | 239.21 | 1.36 |
| L | 20 | 246.90 | 1.67 | 233.69 | 1.30 |
| L | 30 | 248.83 | 1.72 | 225.76 | 1.14 |
| L | 40 | 251.07 | 1.82 | 215.38 | 1.47 |
| L | 50 | 253.22 | 1.92 | 201.06 | 1.47 |
| L | 60 | 253.38 | 1.82 | 177.58 | 0.68 |
| L | 70 | 242.54 | 1.85 | 148.00 | 1.20 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 10.84 | 15.37 | 17.49 | 18.86 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 31.9 | 34.4 | 33.8 | 31.6 | 30.7 | 29.6 |

Date: 8/17/81

Time: 0843-0906

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 231.94 | 0.42 | 226.89 | 0.91 |
| X | 20 | 231.12 | 0.62 | 219.09 | 0.41 |
| X | 30 | 236.06 | 0.72 | 213.54 | 0.90 |
| X | 40 | 245.47 | — | 207.21 | 0.76 |
| X | 50 | 252.94 | — | 196.26 | 0.65 |
| X | 60 | 261.16 | — | 184.43 | 0.76 |
| X | 70 | 259.09 | — | 169.01 | 0.49 |
| C | 10 | 215.78 | 0.25 | 214.35 | 0.46 |
| C | 20 | 222.05 | 0.74 | 214.41 | 0.75 |
| C | 30 | 228.79 | — | 208.05 | — |
| C | 40 | 237.14 | — | 199.26 | — |
| C | 50 | 250.77 | — | 189.34 | 0.50 |
| C | 60 | 259.21 | — | 175.91 | 0.30 |
| C | 70 | 261.24 | — | 165.91 | 0.22 |
| L | 10 | 228.11 | 1.44 | 220.78 | 0.92 |
| L | 20 | 229.76 | 1.67 | 215.48 | 1.26 |
| L | 30 | 233.07 | 1.81 | 207.39 | 1.36 |
| L | 40 | 235.86 | 1.74 | 196.95 | 1.33 |
| L | 50 | 241.58 | 1.59 | 182.68 | 1.16 |
| L | 60 | 241.58 | 1.36 | 160.21 | 0.81 |
| L | 70 | 235.79 | 1.53 | 131.96 | 1.02 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 15.16 | 17.52 | 17.01 | 18.35 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 18.8 | 17.9 | 16.6 | 16.1 | 17.7 | 19.1 |

Date: 8/18/81

Time: 1022-1051

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 261.42 | 0.62 | 258.42 | 0.42 |
| X | 20 | 269.13 | — | 263.07 | 0.67 |
| X | 30 | 269.13 | 0.53 | 253.35 | 0.52 |
| X | 40 | 272.50 | — | 244.36 | 0.34 |
| X | 50 | 276.64 | 1.08 | 236.13 | 0.67 |
| X | 60 | 277.93 | 1.03 | 225.08 | 0.14 |
| X | 70 | 273.58 | 0.83 | 207.28 | 0.81 |
| C | 10 | 255.78 | — | 256.10 | 1.00 |
| C | 20 | 264.50 | 0.85 | 259.08 | — |
| C | 30 | 266.69 | 0.44 | 252.60 | 1.15 |
| C | 40 | 270.25 | — | 243.97 | 0.28 |
| C | 50 | 273.92 | 0.83 | 233.52 | — |
| C | 60 | 279.04 | 0.97 | 219.99 | — |
| C | 70 | 270.78 | 0.99 | 202.15 | 0.79 |
| L | 10 | 249.47 | 1.25 | 243.09 | 0.97 |
| L | 20 | 252.74 | 1.59 | 241.63 | 1.52 |
| L | 30 | 253.07 | 1.54 | 232.01 | 1.12 |
| L | 40 | 253.26 | 2.12 | 221.06 | 1.30 |
| L | 50 | 253.90 | 2.07 | 206.03 | 1.53 |
| L | 60 | 251.09 | 1.58 | 181.72 | 1.09 |
| L | 70 | 236.71 | 1.46 | 150.93 | 1.41 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 8.15 | 14.06 | 15.72 | 18.15 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.2 | 24.5 | 21.9 | 20.4 | 20.1 | 17.6 |

Date: 8/19/81

Time: 0851-0924

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | | | | |
| X | 20 | | | | |
| X | 30 | | | | |
| X | 40 | | | | |
| X | 50 | | | | |
| X | 60 | | | | |
| X | 70 | | | | |
| C | 10 | 253.33 | 0.39 | 250.79 | 0.92 |
| C | 20 | 256.56 | 0.37 | 250.99 | 0.23 |
| C | 30 | 260.82 | 0.27 | 240.94 | 0.39 |
| C | 40 | 265.47 | 0.34 | 236.68 | 0.31 |
| C | 50 | 271.69 | 0.37 | 225.66 | 0.35 |
| C | 60 | 273.36 | 0.31 | 207.74 | 0.35 |
| C | 70 | 263.98 | 0.33 | 183.06 | 0.39 |
| L | 10 | 252.91 | 2.25 | 249.91 | 1.76 |
| L | 20 | 255.75 | 1.32 | 242.71 | 1.43 |
| L | 30 | 254.71 | 1.50 | 233.89 | 1.23 |
| L | 40 | 254.44 | 2.01 | 221.89 | 1.21 |
| L | 50 | 256.09 | 2.01 | 207.67 | 1.20 |
| L | 60 | 251.45 | 1.77 | 182.37 | 1.08 |
| L | 70 | 240.12 | 5.73 | 151.38 | 1.18 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 8.98 | 12.36 | 16.01 | 17.32 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 20.1 | 18.9 | 17.9 | 17.6 | 19.0 | 18.0 |

Date: 8/20/81

Time: 0836-

Plot No.: 221

Field: Bare (smooth)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 262.82 | 0.80 | 259.78 | 0.57 |
| X | 20 | 269.88 | 0.86 | 264.90 | 0.40 |
| X | 30 | 268.88 | 0.78 | 255.34 | 0.41 |
| X | 40 | 271.39 | 0.86 | 247.55 | 0.37 |
| X | 50 | 274.51 | 0.88 | 243.20 | 0.49 |
| X | 60 | 274.36 | 0.84 | 230.89 | 0.51 |
| X | 70 | 265.99 | 0.73 | 205.03 | 0.38 |
| C | 10 | 257.89 | 0.28 | 258.63 | 0.34 |
| C | 20 | 262.66 | 0.30 | 258.64 | 0.31 |
| C | 30 | 265.14 | 0.28 | 252.55 | 0.37 |
| C | 40 | 269.28 | 0.34 | 244.51 | 0.36 |
| C | 50 | 274.87 | 0.31 | 234.27 | 0.34 |
| C | 60 | 275.94 | 0.36 | 217.23 | 0.32 |
| C | 70 | 264.54 | 0.35 | 190.97 | 0.31 |
| L | 10 | 253.62 | 1.48 | 246.91 | 1.21 |
| L | 20 | 255.85 | 1.75 | 244.11 | 1.26 |
| L | 30 | 254.85 | 2.20 | 234.02 | 1.05 |
| L | 40 | 254.11 | 1.80 | 222.92 | 1.16 |
| L | 50 | 255.93 | 1.47 | 209.34 | 1.31 |
| L | 60 | 252.94 | 1.85 | 185.20 | 1.23 |
| L | 70 | 237.79 | 1.57 | 152.21 | 1.25 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.52 | 10.49 | 15.02 | 16.35 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 20.3 | 18.8 | 17.6 | 16.9 | 18.1 | 18.5 |

Date: 7/30/81

Time: 1226-1248

Plot No.: 223

Field: Bare (rough)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 287.19 | 0.92 | 287.46 | 0.49 |
| X | 20 | 287.77 | 0.36 | 287.66 | 0.78 |
| X | 30 | 289.02 | — | 287.47 | 0.41 |
| X | 40 | 289.11 | 0.25 | 285.90 | 0.64 |
| X | 50 | 289.35 | 1.08 | 284.02 | — |
| X | 60 | 289.38 | 0.83 | 282.35 | — |
| X | 70 | 287.11 | 1.17 | 277.38 | 0.72 |
| C | 10 | 276.85 | 0.21 | 280.62 | 0.83 |
| C | 20 | 282.81 | 0.54 | 284.34 | 0.83 |
| C | 30 | 284.53 | 0.74 | 283.85 | 1.00 |
| C | 40 | 285.46 | 0.56 | 281.76 | — |
| C | 50 | 286.39 | — | 279.36 | 1.20 |
| C | 60 | 287.74 | 0.51 | 276.79 | — |
| C | 70 | 283.11 | — | 268.24 | 0.33 |
| L | 10 | 267.75 | 1.77 | 266.64 | 1.25 |
| L | 20 | 269.74 | 1.81 | 265.47 | 1.10 |
| L | 30 | 269.08 | 1.88 | 260.71 | 1.38 |
| L | 40 | 266.82 | 1.60 | 254.81 | 1.20 |
| L | 50 | 264.53 | 1.33 | 248.62 | 1.24 |
| L | 60 | 259.15 | 1.45 | 240.14 | 1.28 |
| L | 70 | 245.44 | 1.48 | 215.12 | 1.68 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 10.24 | 11.73 | 14.56 | 20.72 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.2 | 39.2 | 31.8 | 27.8 | 27.3 | 23.7 |

Date: 7/31/81

Time: 0841-0900

Plot No.: 223

Field: Bare (rough)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 279.22 | 0.62 | 279.20 | — |
| X | 20 | 274.54 | 0.43 | 275.25 | 0.54 |
| X | 30 | 276.27 | — | 274.73 | 1.09 |
| X | 40 | 277.97 | 0.59 | 273.62 | — |
| X | 50 | 280.04 | 0.94 | 273.51 | — |
| X | 60 | 280.23 | — | 271.27 | — |
| X | 70 | 279.42 | 0.94 | 269.13 | 0.73 |
| C | 10 | 271.06 | — | 272.86 | — |
| C | 20 | 276.25 | — | 277.12 | — |
| C | 30 | 277.92 | 0.74 | 276.23 | 0.74 |
| C | 40 | 279.21 | 0.90 | 274.03 | — |
| C | 50 | 280.03 | — | 270.95 | — |
| C | 60 | 279.87 | — | 266.56 | 0.66 |
| C | 70 | 277.36 | 0.85 | 260.86 | 0.79 |
| L | 10 | 268.86 | 1.98 | 267.79 | 1.36 |
| L | 20 | 271.26 | 1.65 | 267.40 | 1.35 |
| L | 30 | 269.72 | 1.69 | 262.75 | 1.06 |
| L | 40 | 266.96 | 1.81 | 257.16 | 0.63 |
| L | 50 | 262.89 | 2.37 | 249.79 | 1.27 |
| L | 60 | 255.78 | 1.43 | 238.08 | 1.10 |
| L | 70 | 241.96 | 1.35 | 217.25 | 1.11 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 11.27 | 21.00 | 15.45 | 23.97 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.7 | 22.8 | 22.8 | 20.6 | 20.8 | 19.9 |

Date: 8/10/81

Time: 0815-0840

Plot No.: 223

Field: Bare (rough)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 283.24 | 0.45 | 281.83 | 0.79 |
| X | 20 | 284.63 | 0.87 | 283.42 | 0.82 |
| X | 30 | 285.23 | 0.35 | 282.44 | — |
| X | 40 | 283.97 | — | 275.73 | 0.68 |
| X | 50 | 284.26 | 1.13 | 273.74 | — |
| X | 60 | 283.43 | 1.05 | 274.32 | 0.98 |
| X | 70 | 280.74 | — | 266.94 | 0.73 |
| C | 10 | 278.28 | 0.51 | 279.59 | 0.67 |
| C | 20 | 280.13 | 0.56 | 279.91 | 0.74 |
| C | 30 | 281.54 | 0.30 | 279.16 | — |
| C | 40 | 279.22 | — | 274.11 | — |
| C | 50 | 281.15 | 0.23 | 272.00 | 0.99 |
| C | 60 | 282.62 | 0.92 | 269.75 | 1.04 |
| C | 70 | 278.60 | — | 259.72 | 0.28 |
| L | 10 | 274.38 | 1.99 | 272.84 | 1.20 |
| L | 20 | 273.86 | 1.45 | 269.14 | 1.61 |
| L | 30 | 272.85 | 2.25 | 265.01 | 1.29 |
| L | 40 | 268.77 | 1.74 | 257.35 | 1.47 |
| L | 50 | 265.57 | 1.49 | 252.16 | 1.28 |
| L | 60 | 260.24 | 1.42 | 244.49 | 1.60 |
| L | 70 | 245.62 | 1.84 | 220.35 | 1.25 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 7.53 | 9.13 | 14.89 | 18.06 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.6 | 23.9 | 23.2 | 22.1 | 23.6 | 22.7 |

Date: 8/11/81

Time: 0808-0835

Plot No.: 223

Field: Bare (rough)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 278.41 | 0.10 | 276.65 | — |
| X | 20 | 278.30 | 0.99 | 274.54 | — |
| X | 30 | 280.14 | — | 275.22 | 0.48 |
| X | 40 | 280.64 | 0.57 | 274.27 | 0.86 |
| X | 50 | 279.88 | 0.66 | 269.31 | 0.35 |
| X | 60 | 278.95 | 0.45 | 266.96 | — |
| X | 70 | 276.51 | 0.80 | 256.40 | — |
| C | 10 | 268.09 | 0.61 | 271.06 | — |
| C | 20 | 273.56 | 0.70 | 273.90 | — |
| C | 30 | 275.87 | 0.62 | 273.08 | — |
| C | 40 | 277.23 | — | 271.25 | 0.88 |
| C | 50 | 278.42 | 0.81 | 269.06 | — |
| C | 60 | 278.64 | — | 262.42 | — |
| C | 70 | 273.77 | — | 249.33 | — |
| L | 10 | 276.07 | 1.50 | 274.18 | 1.19 |
| L | 20 | 278.44 | 2.05 | 274.82 | 1.88 |
| L | 30 | 276.99 | 1.70 | 270.34 | 1.40 |
| L | 40 | 275.08 | 1.90 | 265.91 | 1.19 |
| L | 50 | 270.78 | 1.89 | 260.37 | 1.07 |
| L | 60 | 264.06 | 1.65 | 252.58 | 0.97 |
| L | 70 | 247.94 | 1.70 | 224.60 | 0.89 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 9.03 | 10.49 | 15.19 | 18.46 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.5 | 24.2 | 22.6 | 23.1 | 24.7 | 23.8 |

Date: 8/13/81

Time: 0812-0835

Plot No.: 223

Field: Bare (rough)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 247.40 | 0.79 | 244.83 | — |
| X | 20 | 247.04 | 0.85 | 240.44 | 0.50 |
| X | 30 | 247.15 | 0.56 | 237.51 | 0.41 |
| X | 40 | 248.43 | — | 233.73 | 0.59 |
| X | 50 | 250.30 | — | 231.46 | 1.10 |
| X | 60 | 252.61 | 0.62 | 229.56 | 0.32 |
| X | 70 | 252.84 | — | 225.82 | 0.75 |
| C | 10 | 226.17 | — | 227.43 | — |
| C | 20 | 229.16 | 0.72 | 227.79 | 0.91 |
| C | 30 | 233.47 | — | 227.11 | 0.27 |
| C | 40 | 238.11 | 0.93 | 226.07 | 0.62 |
| C | 50 | 243.63 | 0.38 | 224.52 | 0.95 |
| C | 60 | 247.82 | — | 219.65 | — |
| C | 70 | 248.43 | — | 211.94 | 0.32 |
| L | 10 | 235.16 | 1.58 | 232.83 | 1.24 |
| L | 20 | 236.13 | 2.06 | 228.32 | 1.21 |
| L | 30 | 237.81 | 1.52 | 223.30 | 1.35 |
| L | 40 | — | — | — | — |
| L | 50 | 239.30 | 1.94 | 214.97 | 1.38 |
| L | 60 | 237.73 | 1.58 | 204.35 | 0.98 |
| L | 70 | 226.29 | 1.67 | 177.31 | 0.88 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 24.31 | 23.47 | 22.24 | 21.71 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 21.5 | 20.4 | 19.6 | 19.3 | 20.9 | 20.2 |

Date: 8/13/81

Time: 1310-1340

Plot No.: 223

Field: Bare (rough)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 263.74 | — | 261.68 | 0.28 |
| X | 20 | 257.63 | 0.49 | 253.03 | 0.70 |
| X | 30 | 260.94 | 0.15 | 252.35 | — |
| X | 40 | 267.83 | 0.94 | 257.44 | 1.09 |
| X | 50 | 268.94 | 0.89 | 254.45 | — |
| X | 60 | 269.89 | 0.50 | 247.38 | 0.58 |
| X | 70 | 270.39 | — | 242.07 | 0.55 |
| C | 10 | 249.13 | — | 251.53 | 0.76 |
| C | 20 | 253.29 | 0.41 | 253.64 | — |
| C | 30 | 256.53 | 0.82 | 252.53 | 0.25 |
| C | 40 | 260.87 | — | 251.40 | — |
| C | 50 | 265.00 | 0.51 | 249.40 | 0.92 |
| C | 60 | 266.61 | 1.17 | 241.97 | — |
| C | 70 | 265.19 | — | 230.82 | — |
| L | 10 | 251.58 | 2.01 | 245.69 | 1.38 |
| L | 20 | 255.14 | 1.37 | 246.29 | 1.34 |
| L | 30 | 252.66 | 2.07 | 240.88 | 1.29 |
| L | 40 | 255.73 | 2.32 | 240.15 | 1.42 |
| L | 50 | 253.47 | 1.49 | 233.13 | 1.46 |
| L | 60 | 247.85 | 2.03 | 217.24 | 0.43 |
| L | 70 | 236.19 | 1.60 | 189.41 | 1.12 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 21.99 | 21.00 | 22.22 | 22.10 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.9 | 28.1 | 27.2 | 26.2 | 27.4 | 24.2 |

Date: 8/14/81

Time: 0808-0832

Plot No.: 223

Field: Bare (rough)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 256.06 | — | 252.68 | 0.50 |
| X | 20 | 250.97 | — | 244.69 | — |
| X | 30 | 254.77 | 0.27 | 244.53 | — |
| X | 40 | 261.03 | 0.73 | 248.19 | — |
| X | 50 | 262.22 | 1.08 | 244.01 | — |
| X | 60 | 263.97 | 0.49 | 239.77 | — |
| X | 70 | 262.61 | — | 237.70 | — |
| C | 10 | 244.40 | — | 245.14 | — |
| C | 20 | 248.50 | — | 247.53 | 0.23 |
| C | 30 | 251.60 | — | 246.10 | — |
| C | 40 | 254.07 | — | 243.61 | — |
| C | 50 | 257.56 | 0.80 | 240.22 | 0.42 |
| C | 60 | 260.02 | 0.17 | 234.59 | — |
| C | 70 | 261.45 | — | 230.01 | 0.20 |
| L | 10 | 246.27 | 0.99 | 243.38 | 1.25 |
| L | 20 | 251.17 | 1.16 | 242.94 | 1.27 |
| L | 30 | 251.06 | 1.36 | 237.70 | 0.96 |
| L | 40 | 250.37 | 1.60 | 231.03 | 1.36 |
| L | 50 | 249.79 | 1.29 | 225.16 | 1.25 |
| L | 60 | 245.36 | 1.45 | 211.31 | 1.04 |
| L | 70 | 234.88 | 1.46 | 191.38 | 1.19 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 10.63 | 16.54 | 17.61 | 20.42 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 31.6 | 35.5 | 31.1 | 28.9 | 29.3 | 28.10 |

Date: 8/14/81

Time: 1313-1335

Plot No.: 223

Field: Bare (rough)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 270.75 | — | 269.29 | 0.57 |
| X | 20 | 269.62 | 0.53 | 265.62 | — |
| X | 30 | 272.73 | 0.97 | 265.63 | 0.68 |
| X | 40 | 275.33 | 0.83 | 263.83 | 0.66 |
| X | 50 | 279.00 | 0.87 | 263.84 | 0.60 |
| X | 60 | 282.00 | — | 265.46 | 0.91 |
| X | 70 | 280.71 | 0.40 | 259.47 | — |
| C | 10 | 271.99 | — | 273.78 | — |
| C | 20 | 273.86 | — | 273.71 | 0.14 |
| C | 30 | 276.73 | 0.44 | 273.18 | 0.85 |
| C | 40 | 277.84 | 0.45 | 270.30 | 0.56 |
| C | 50 | 280.09 | — | 268.03 | — |
| C | 60 | 283.04 | — | 265.13 | 0.50 |
| C | 70 | 280.18 | 0.60 | 258.05 | — |
| L | 10 | 264.06 | 1.16 | 256.77 | 1.01 |
| L | 20 | 261.08 | 2.02 | 253.29 | 1.11 |
| L | 30 | 263.27 | 1.67 | 250.26 | 1.17 |
| L | 40 | 260.10 | 1.26 | 242.88 | 1.25 |
| L | 50 | 257.08 | 1.40 | 236.62 | 1.02 |
| L | 60 | 253.65 | 1.21 | 227.90 | 1.17 |
| L | 70 | 241.65 | 1.48 | 206.09 | 1.15 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 16.66 | 19.57 | 19.77 | 21.72 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.3 | 21.2 | 21.0 | 20.2 | 21.6 | 22.8 |

Date: 8/17/81

Time: 0808-0841

Plot No.: 223

Field: Bare (rough)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 252.03 | — | 250.68 | — |
| X | 20 | 249.21 | 0.75 | 245.03 | 0.40 |
| X | 30 | 250.36 | — | 241.42 | 0.94 |
| X | 40 | 255.90 | 0.29 | 243.31 | 0.46 |
| X | 50 | 257.19 | 0.55 | 239.66 | 0.48 |
| X | 60 | 259.27 | 0.62 | 238.82 | 0.35 |
| X | 70 | 260.39 | 1.03 | 237.97 | 0.45 |
| C | 10 | 239.85 | 1.00 | 242.98 | 0.82 |
| C | 20 | 245.24 | — | 243.80 | 0.79 |
| C | 30 | 249.37 | 0.86 | 243.90 | — |
| C | 40 | 251.45 | — | 241.11 | 0.69 |
| C | 50 | 254.92 | 0.82 | 238.15 | 0.39 |
| C | 60 | 257.69 | — | 233.28 | — |
| C | 70 | 257.51 | — | 225.95 | 0.46 |
| L | 10 | 242.67 | 1.57 | 240.78 | 1.43 |
| L | 20 | 247.74 | 1.90 | 241.30 | 0.80 |
| L | 30 | 247.64 | 1.65 | 236.62 | 1.17 |
| L | 40 | 244.70 | 1.74 | 228.69 | 1.03 |
| L | 50 | 243.66 | 2.55 | 221.97 | 1.05 |
| L | 60 | 239.56 | 2.18 | 208.69 | 1.40 |
| L | 70 | 228.76 | 1.69 | 185.44 | 0.99 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 14.82 | 16.74 | 16.61 | 21.68 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 17.8 | 16.0 | 18.1 | 16.3 | 18.3 | 16.4 |

Date: 8/18/81

Time: 0956-1020

Plot No.: 223

Field: Bare (rough)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 275.40 | 0.87 | 274.75 | — |
| X | 20 | 275.81 | 0.89 | 273.55 | — |
| X | 30 | 276.55 | 0.62 | 270.78 | — |
| X | 40 | 277.79 | — | 268.09 | 0.64 |
| X | 50 | 280.56 | 0.61 | 269.42 | — |
| X | 60 | 279.98 | 0.62 | 262.82 | — |
| X | 70 | 280.14 | 1.47 | 262.66 | — |
| C | 10 | 269.89 | — | 270.74 | 0.60 |
| C | 20 | 272.79 | — | 272.12 | — |
| C | 30 | 274.70 | 0.34 | 271.14 | — |
| C | 40 | 276.72 | — | 269.59 | — |
| C | 50 | 276.11 | 0.36 | 264.32 | — |
| C | 60 | 279.47 | 0.40 | 263.20 | 0.91 |
| C | 70 | 276.93 | 0.52 | 256.90 | 0.91 |
| L | 10 | 258.09 | 1.86 | 255.21 | 1.29 |
| L | 20 | 260.45 | 1.91 | 254.90 | 1.44 |
| L | 30 | 258.44 | 1.04 | 250.46 | 1.31 |
| L | 40 | 256.26 | 1.58 | 243.67 | 1.44 |
| L | 50 | 252.82 | 1.69 | 233.28 | 1.18 |
| L | 60 | 248.76 | 1.66 | 225.86 | 1.38 |
| L | 70 | 235.51 | 2.09 | 203.59 | 1.40 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 8.22 | 12.40 | 17.42 | 19.54 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 21.4 | 19.8 | 21.2 | 18.5 | 20.9 | |

Date: 8/19/81

Time: 0820-0849

Plot No.: 223

Field: Bare (rough)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | | | | |
| X | 20 | | | | |
| X | 30 | | | | |
| X | 40 | | | | |
| X | 50 | | | | |
| X | 60 | | | | |
| X | 70 | | | | |
| C | 10 | 262.69 | 0.53 | 263.87 | 0.45 |
| C | 20 | 266.23 | 0.29 | 265.87 | 0.32 |
| C | 30 | 267.72 | 0.33 | 264.46 | 0.32 |
| C | 40 | 269.72 | 0.26 | 262.66 | 0.32 |
| C | 50 | 269.28 | 0.25 | 256.66 | 0.31 |
| C | 60 | 272.10 | 0.28 | 255.17 | 0.24 |
| C | 70 | 269.24 | 0.22 | 248.26 | 0.38 |
| L | 10 | 259.48 | 1.83 | 257.23 | 1.38 |
| L | 20 | 260.82 | 1.76 | 255.02 | 1.31 |
| L | 30 | 259.71 | 1.77 | 251.03 | 1.30 |
| L | 40 | 257.76 | 2.39 | 246.04 | 1.11 |
| L | 50 | 253.85 | 1.79 | 236.01 | 1.11 |
| L | 60 | 249.46 | 1.71 | 230.73 | 1.27 |
| I | 70 | 234.33 | 1.26 | 210.33 | 1.09 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 7.97 | 15.06 | 18.72 | 19.96 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 19.5 | 18.0 | 17.1 | 16.8 | 18.4 | 16.8 |

Date: 8/20/81

Time: 0809-0834

Plot No.: 223

Field: Bare (rough)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 271.48 | 0.81 | 270.35 | 0.47 |
| X | 20 | 270.03 | 0.85 | 266.25 | 0.47 |
| X | 30 | 271.56 | 0.89 | 264.62 | 0.35 |
| X | 40 | 273.60 | 0.91 | 262.54 | 0.78 |
| X | 50 | 273.55 | 0.85 | 258.50 | 0.55 |
| X | 60 | 273.64 | 0.77 | 257.06 | 0.44 |
| X | 70 | 272.60 | 0.71 | 252.26 | 0.51 |
| C | 10 | 267.96 | 0.28 | 270.03 | 0.33 |
| C | 20 | 270.04 | 0.35 | 270.18 | 0.35 |
| C | 30 | 271.54 | 0.29 | 268.99 | 0.32 |
| C | 40 | 272.49 | 0.36 | 266.39 | 0.32 |
| C | 50 | 274.84 | 0.30 | 263.98 | 0.23 |
| C | 60 | 275.39 | 0.44 | 260.71 | 0.32 |
| C | 70 | 271.96 | 0.27 | 251.86 | 0.39 |
| L | 10 | 265.12 | 2.22 | 261.24 | 1.19 |
| L | 20 | 264.70 | 2.34 | 259.55 | 1.67 |
| L | 30 | 264.10 | 2.22 | 255.83 | 1.01 |
| L | 40 | 260.36 | 1.57 | 248.71 | 1.14 |
| L | 50 | 257.38 | 1.23 | 243.83 | 1.09 |
| L | 60 | 253.42 | 1.56 | 236.47 | 1.35 |
| L | 70 | 236.64 | 1.68 | 213.12 | 1.49 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.60 | 11.95 | 16.73 | 19.04 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 20.0 | 17.1 | 18.4 | 16.9 | 18.7 | 17.5 |

Date: 6/29/81

Time: 0823-0907

Plot No.: 291

Field: Wheat

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 276.56 | 0.93 | 273.95 | 0.31 |
| X | 20 | 278.12 | 0.74 | 273.89 | 1.15 |
| X | 30 | 280.45 | 0.59 | 274.33 | — |
| X | 40 | 281.59 | 1.40 | 274.50 | 0.82 |
| X | 50 | 280.62 | — | 270.56 | — |
| X | 60 | 278.87 | 0.44 | 268.36 | — |
| X | 70 | 280.30 | 0.30 | 268.50 | 0.71 |
| C | 10 | 260.54 | — | 259.59 | — |
| C | 20 | 263.55 | — | 257.43 | — |
| C | 30 | 267.26 | 1.01 | 254.31 | — |
| C | 40 | 272.14 | 0.95 | 251.16 | — |
| C | 50 | 276.19 | 0.43 | 248.13 | 0.70 |
| C | 60 | 279.47 | — | 248.24 | 0.95 |
| C | 70 | 279.82 | — | 250.26 | 0.50 |
| L | 10 | 240.10 | 1.89 | 233.85 | 1.21 |
| L | 20 | 238.93 | 1.20 | 227.92 | 1.04 |
| L | 30 | 241.35 | 1.20 | 219.74 | 0.79 |
| L | 40 | 243.05 | 1.79 | 209.36 | 1.41 |
| L | 50 | 240.22 | 1.61 | 186.45 | 1.15 |
| L | 60 | 242.90 | 1.78 | 171.76 | 1.37 |
| L | 70 | 239.77 | 1.98 | 158.67 | 1.19 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 14.12 | 15.96 | 16.11 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.3 | 21.0 | 19.4 | 18.4 | 19.7 | 19.7 |

Date: 6/30/81

Time: 0959-1045

Plot No.: 291

Field: Wheat

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.71 | 0.45 | 278.21 | 0.73 |
| X | 20 | 278.17 | 1.45 | 278.39 | 0.77 |
| X | 30 | 282.48 | 1.04 | 275.26 | 0.62 |
| X | 40 | 281.02 | 0.90 | 270.78 | 0.82 |
| X | 50 | 279.64 | 0.56 | 261.22 | 0.43 |
| X | 60 | 279.86 | 0.46 | 259.37 | 0.89 |
| X | 70 | 281.84 | 0.40 | 257.79 | 0.63 |
| C | 10 | 265.11 | 0.63 | 260.13 | 0.13 |
| C | 20 | 266.30 | 0.73 | 257.92 | 0.34 |
| C | 30 | 269.14 | 0.54 | 252.88 | 0.70 |
| C | 40 | 271.93 | 0.42 | 246.96 | 0.59 |
| C | 50 | 276.14 | 1.11 | 240.62 | — |
| C | 60 | 280.34 | 0.56 | 239.21 | — |
| C | 70 | 282.67 | 0.54 | 238.77 | — |
| L | 10 | 245.63 | 1.76 | 238.11 | 1.02 |
| L | 20 | 246.47 | 1.62 | 233.53 | 1.59 |
| L | 30 | 243.12 | 1.54 | 216.43 | 1.55 |
| L | 40 | 242.96 | 1.44 | 205.40 | 0.74 |
| L | 50 | 244.15 | 2.12 | 189.19 | 0.97 |
| L | 60 | 245.12 | 2.02 | 171.50 | 1.25 |
| L | 70 | 243.74 | 1.64 | 156.74 | 1.31 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 10.69 | 13.18 | 14.52 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.0 | 27.0 | 25.8 | 23.1 | 23.7 | 22.4 |

Date: 7/2/81

Time: 1000-

Plot No.: 291

Field: Wheat

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 288.09 | — | 286.20 | 0.95 |
| X | 20 | 288.46 | 0.12 | 286.28 | — |
| X | 30 | 287.49 | 0.72 | 285.54 | 0.59 |
| X | 40 | 286.15 | 0.20 | 284.71 | 0.69 |
| X | 50 | 282.66 | — | 280.94 | 1.05 |
| X | 60 | 279.07 | 0.88 | 278.29 | 1.00 |
| X | 70 | 271.84 | — | 268.25 | — |
| C | 10 | 279.66 | — | 278.71 | — |
| C | 20 | 280.15 | — | 278.32 | 0.76 |
| C | 30 | 281.80 | 1.05 | 277.87 | — |
| C | 40 | 281.98 | 0.80 | 277.14 | — |
| C | 50 | 280.14 | 0.73 | 276.41 | 0.71 |
| C | 60 | 277.61 | — | 276.02 | 0.28 |
| C | 70 | 271.86 | — | 271.57 | 0.85 |
| L | 10 | 234.78 | 1.73 | 226.84 | 1.41 |
| L | 20 | 234.79 | 1.72 | 219.33 | 1.12 |
| L | 30 | 239.26 | 1.68 | 212.97 | 0.78 |
| L | 40 | 241.99 | 1.96 | 205.65 | 0.95 |
| L | 50 | 244.00 | 1.34 | 200.26 | 1.20 |
| L | 60 | 245.41 | 1.22 | 193.49 | 0.93 |
| L | 70 | 241.62 | 1.76 | 189.90 | 1.40 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 24.02 | 22.63 | 22.91 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.9 | 24.2 | 22.5 | 21.8 | 22.5 | 20.7 |

Date: 7/7/81

Time: 1320-1345

Plot No.: 291

Field: Wheat

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 277.24 | — | 272.06 | 0.65 |
| X | 20 | 279.51 | 0.77 | 273.26 | — |
| X | 30 | 280.96 | — | 270.88 | 1.12 |
| X | 40 | 282.60 | 0.46 | 269.33 | 0.44 |
| X | 50 | 283.61 | 0.62 | 269.28 | 0.52 |
| X | 60 | 283.72 | 0.89 | 270.97 | 0.62 |
| X | 70 | 281.78 | 0.10 | 267.88 | — |
| C | 10 | 262.56 | 0.52 | 259.36 | 0.36 |
| C | 20 | 263.95 | — | 258.09 | 0.56 |
| C | 30 | 267.31 | 0.45 | 254.72 | — |
| C | 40 | 271.45 | — | 251.07 | 0.48 |
| C | 50 | 276.47 | 0.73 | 247.62 | — |
| C | 60 | 281.02 | — | 245.97 | 0.54 |
| C | 70 | 281.46 | — | 245.90 | 0.49 |
| L | 10 | | | | |
| L | 20 | | | | |
| L | 30 | | | | |
| L | 40 | | | | |
| L | 50 | | | | |
| L | 60 | | | | |
| L | 70 | | | | |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 18.03 | 19.66 | 17.74 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 32.2 | 28.8 | 29.6 | 26.2 | 25.8 | 22.6 |

Date: 7/30/81

Time: -1345

Plot No.: 291

Field: Wheat (cut down)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 269.64 | 0.87 | 266.95 | 0.70 |
| X | 20 | 271.31 | 0.50 | 265.46 | — |
| X | 30 | 272.74 | 0.71 | 262.07 | 1.03 |
| X | 40 | 274.88 | — | 259.98 | 0.55 |
| X | 50 | 277.07 | — | 258.76 | 0.67 |
| X | 60 | 278.73 | 0.97 | 258.91 | 0.28 |
| X | 70 | 276.19 | 0.84 | 257.21 | 0.80 |
| C | 10 | 255.29 | 0.52 | 253.60 | 0.96 |
| C | 20 | 257.50 | 0.64 | 251.20 | — |
| C | 30 | 259.65 | — | 247.19 | 1.15 |
| C | 40 | 264.94 | — | 243.84 | — |
| C | 50 | 271.49 | 0.78 | 242.12 | 0.51 |
| C | 60 | 276.03 | — | 239.13 | — |
| C | 70 | 273.77 | 0.52 | 234.28 | 0.58 |
| L | 10 | 227.38 | 1.11 | 215.22 | 1.44 |
| L | 20 | 230.16 | 1.53 | 210.98 | 1.13 |
| L | 30 | 230.36 | 1.72 | 201.22 | 1.24 |
| L | 40 | 233.38 | 1.58 | 191.46 | 1.22 |
| L | 50 | 235.34 | 1.46 | 179.98 | 1.31 |
| L | 60 | 236.70 | 1.07 | 156.18 | 1.22 |
| L | 70 | 232.90 | 1.78 | 128.75 | 1.19 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 15.43 | 16.21 | 18.84 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.9 | 31.1 | 29.9 | 27.6 | 27.9 | 24.4 |



Date: 7/31/81

Time: 0815-0840

Plot No.: 291

Field: Wheat*

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 279.59 | 0.98 | 279.05 | — |
| X | 20 | 279.80 | 0.52 | 278.30 | — |
| X | 30 | 279.57 | 0.85 | 276.33 | — |
| X | 40 | 279.23 | 0.48 | 274.22 | 0.79 |
| X | 50 | 279.20 | — | 273.52 | 0.69 |
| X | 60 | 277.56 | 0.63 | 269.02 | 1.10 |
| X | 70 | 273.94 | — | 262.81 | — |
| C | 10 | 274.85 | — | 272.04 | 0.12 |
| C | 20 | 275.25 | 0.29 | 271.18 | 0.20 |
| C | 30 | 276.26 | 0.41 | 270.62 | — |
| C | 40 | 277.89 | 0.77 | 270.06 | — |
| C | 50 | 279.19 | — | 269.76 | — |
| C | 60 | 279.38 | 0.93 | 266.41 | 0.15 |
| C | 70 | 273.74 | 0.10 | 258.82 | — |
| L | 10 | 242.57 | 0.89 | 234.05 | 0.81 |
| L | 20 | 238.62 | 1.61 | 221.28 | 0.76 |
| L | 30 | 239.59 | 1.71 | 214.19 | 1.55 |
| L | 40 | 240.33 | 1.75 | 205.60 | 0.63 |
| L | 50 | 241.46 | 1.36 | 199.01 | 1.00 |
| L | 60 | 237.69 | 1.60 | 172.90 | 1.42 |
| L | 70 | 226.18 | 2.23 | 146.02 | 1.37 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 18.76 | 18.46 | 18.41 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 21.8 | 22.4 | 20.3 | 19.7 | 21.0 | 20.1 |

* Wheat was cut

Date: 8/10/81

Time: 0843-0905

Plot No.: 291

Field: Wheat*

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 285.12 | — | 283.37 | — |
| X | 20 | 284.57 | — | 282.47 | — |
| X | 30 | 284.60 | 0.64 | 281.86 | 0.84 |
| X | 40 | 283.87 | — | 280.27 | 0.27 |
| X | 50 | 282.43 | 0.47 | 277.42 | 1.19 |
| X | 60 | 279.76 | 0.66 | 273.86 | 0.39 |
| X | 70 | 276.59 | — | 269.30 | 1.19 |
| C | 10 | 274.58 | 1.04 | 273.12 | 0.47 |
| C | 20 | 275.14 | — | 271.63 | 0.32 |
| C | 30 | 276.25 | — | 269.92 | — |
| C | 40 | 278.07 | — | 268.32 | 0.32 |
| C | 50 | 279.85 | 0.44 | 265.71 | — |
| C | 60 | 281.13 | — | 263.79 | 0.19 |
| C | 70 | 278.32 | — | 260.50 | 0.52 |
| L | 10 | 246.09 | 1.45 | 237.83 | 1.41 |
| L | 20 | 245.21 | 1.59 | 231.74 | 1.33 |
| L | 30 | 245.88 | 1.63 | 225.74 | 1.01 |
| L | 40 | 245.43 | 1.92 | 217.74 | 0.94 |
| L | 50 | 244.46 | 1.55 | 206.28 | 1.53 |
| L | 60 | 240.93 | 1.22 | 185.17 | 1.20 |
| L | 70 | 229.17 | 1.43 | 155.30 | 1.12 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 13.17 | 15.53 | 15.31 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.0 | 26.4 | 24.9 | 22.9 | 24.4 | 23.3 |

* Wheat was cut and removed. Only grass remained.

Date: 8/11/81

Time: 0838-0900

Plot No.: 291

Field: Wheat*

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 277.02 | — | 277.58 | 0.53 |
| X | 20 | 278.13 | 0.55 | 276.96 | 0.24 |
| X | 30 | 280.25 | 1.11 | 276.91 | 0.76 |
| X | 40 | 280.75 | 0.51 | 274.85 | — |
| X | 50 | 280.58 | 1.26 | 272.28 | 0.86 |
| X | 60 | 278.84 | 0.80 | 268.82 | — |
| X | 70 | 275.57 | 0.79 | 264.25 | — |
| C | 10 | 280.02 | 0.10 | 278.53 | — |
| C | 20 | 280.06 | 0.44 | 277.34 | 0.81 |
| C | 30 | 282.34 | 0.33 | 278.51 | 0.29 |
| C | 40 | 283.47 | 0.98 | 276.27 | 0.60 |
| C | 50 | 284.57 | 0.49 | 275.50 | 0.25 |
| C | 60 | 284.44 | 0.85 | 273.46 | 0.48 |
| C | 70 | 279.52 | 0.78 | 267.52 | — |
| L | 10 | 263.66 | 1.91 | 252.03 | 1.27 |
| L | 20 | 267.09 | 1.74 | 251.53 | 1.35 |
| L | 30 | 265.75 | 1.62 | 246.88 | 1.22 |
| L | 40 | 262.21 | 1.56 | 236.59 | 0.98 |
| L | 50 | 258.47 | 1.22 | 228.41 | 0.61 |
| L | 60 | 251.88 | 1.60 | 213.09 | 1.60 |
| L | 70 | 235.36 | 1.63 | 182.38 | 1.00 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 15.26 | 15.64 | 16.37 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.4 | 25.3 | 23.8 | 23.5 | 24.8 | 23.5 |

* Grass cover only

Date: 8/13/81

Time: 0900-0928

Plot No.: 291

Field: Wheat*

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 274.07 | — | 271.82 | — |
| X | 20 | 274.28 | 0.75 | 271.35 | — |
| X | 30 | 276.34 | — | 272.61 | — |
| X | 40 | 275.73 | 0.92 | 269.69 | — |
| X | 50 | 275.29 | — | 268.05 | — |
| X | 60 | 271.80 | 0.59 | 263.68 | — |
| X | 70 | 270.30 | — | 259.08 | — |
| C | 10 | 272.62 | — | 272.87 | 0.49 |
| C | 20 | 273.14 | 0.70 | 271.95 | — |
| C | 30 | 274.84 | — | 271.23 | 0.68 |
| C | 40 | 275.67 | 0.80 | 269.79 | — |
| C | 50 | 277.53 | 0.35 | 268.97 | — |
| C | 60 | 277.35 | 0.76 | 268.38 | 0.39 |
| C | 70 | 275.20 | 0.99 | 264.65 | 0.35 |
| L | 10 | 249.98 | 1.37 | 234.88 | 1.14 |
| L | 20 | 249.55 | 1.40 | 231.61 | 1.14 |
| L | 30 | 248.58 | 1.81 | 227.27 | 1.12 |
| L | 40 | 246.10 | 1.52 | 220.43 | 1.25 |
| L | 50 | 243.06 | 1.37 | 213.03 | 1.07 |
| L | 60 | 237.25 | 1.75 | 198.56 | 1.15 |
| L | 70 | 225.29 | 1.34 | 170.37 | 1.04 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 19.87 | 19.95 | 20.31 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.0 | 21.7 | 21.5 | 21.3 | 22.3 | 20.9 |

*Grass cover only

Date: 8/14/81

Time: 0904-0940

Plot No.: 291

Field: Wheat*

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 276.27 | — | 273.75 | — |
| X | 20 | 275.38 | 0.96 | 272.60 | 0.36 |
| X | 30 | 277.82 | 0.83 | 274.39 | 0.61 |
| X | 40 | 277.31 | — | 271.50 | 0.39 |
| X | 50 | 275.80 | 0.43 | 268.07 | — |
| X | 60 | 274.84 | 0.96 | 265.34 | 0.72 |
| X | 70 | 271.25 | 0.52 | 259.80 | — |
| C | 10 | 271.55 | 0.27 | 270.68 | — |
| C | 20 | 272.48 | 0.57 | 270.26 | — |
| C | 30 | 273.55 | 0.31 | 268.89 | 0.78 |
| C | 40 | 275.11 | 0.31 | 267.71 | — |
| C | 50 | 277.45 | — | 267.83 | — |
| C | 60 | 278.63 | 0.10 | 266.19 | 0.96 |
| C | 70 | 276.25 | 0.58 | 263.08 | — |
| L | 10 | 245.65 | 1.97 | 233.03 | 1.30 |
| L | 20 | 249.63 | 1.79 | 237.37 | 1.57 |
| L | 30 | 250.74 | 1.25 | 230.81 | 1.25 |
| L | 40 | 249.19 | 1.42 | 224.80 | 1.37 |
| L | 50 | 247.76 | 1.38 | 219.82 | 0.91 |
| L | 60 | 240.91 | 1.48 | 201.96 | 1.52 |
| L | 70 | 226.33 | 1.45 | 175.14 | 1.16 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 19.90 | 21.04 | 20.32 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.7 | 22.0 | 21.7 | 21.2 | 22.4 | 22.1 |

* Grass cover only

Date: 8/17/81

Time: 0915-0940

Plot No.: 291

Field: Wheat*

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 274.84 | — | 273.63 | — |
| X | 20 | 274.92 | — | 273.75 | 0.26 |
| X | 30 | 272.94 | — | 271.27 | 0.70 |
| X | 40 | 272.54 | 0.85 | 269.23 | 0.73 |
| X | 50 | 273.00 | 0.97 | 267.91 | 0.35 |
| X | 60 | 270.36 | — | 265.31 | 0.79 |
| X | 70 | 268.50 | 0.99 | 262.35 | — |
| C | 10 | 264.92 | 0.82 | 264.79 | — |
| C | 20 | 267.73 | 0.65 | 266.03 | 1.03 |
| C | 30 | 269.50 | — | 265.51 | — |
| C | 40 | 271.11 | 0.62 | 264.11 | — |
| C | 50 | 272.44 | — | 261.22 | — |
| C | 60 | 274.93 | — | 263.42 | 0.50 |
| C | 70 | 276.36 | 0.58 | 263.85 | 0.99 |
| L | 10 | 241.37 | 1.72 | 232.06 | 1.01 |
| L | 20 | 244.24 | 1.87 | 234.71 | 1.31 |
| L | 30 | 246.45 | 1.37 | 233.60 | 1.13 |
| L | 40 | 245.52 | 1.81 | 226.50 | 1.35 |
| L | 50 | 241.95 | 1.65 | 213.02 | 1.24 |
| L | 60 | 237.85 | 1.41 | 204.90 | 1.09 |
| L | 70 | 223.27 | 1.83 | 183.74 | 1.25 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 17.71 | 17.93 | 18.61 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 19.2 | 16.7 | 16.9 | 17.4 | 20.1 | 19.8 |

* Grass cover only

Date: 8/18/81

Time: 1050-1120

Plot No.: 291

Field: Wheat*

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 282.28 | — | 283.55 | 0.66 |
| X | 20 | 281.68 | 0.65 | 281.55 | 0.68 |
| X | 30 | 281.19 | 0.67 | 280.76 | 0.80 |
| X | 40 | 278.80 | 0.23 | 274.91 | 0.63 |
| X | 50 | 278.90 | — | 276.51 | 0.68 |
| X | 60 | 276.99 | 0.50 | 273.79 | — |
| X | 70 | 271.87 | 1.06 | 268.27 | — |
| C | 10 | 270.16 | 0.75 | 271.29 | 0.24 |
| C | 20 | 269.53 | — | 268.75 | — |
| C | 30 | 270.99 | 0.67 | 267.79 | 0.64 |
| C | 40 | 272.21 | 0.87 | 264.02 | 0.65 |
| C | 50 | 279.06 | — | 269.43 | 0.62 |
| C | 60 | 280.45 | — | 270.29 | 0.82 |
| C | 70 | 278.55 | — | 267.18 | 0.90 |
| L | 10 | 252.11 | 1.19 | 248.17 | 0.95 |
| L | 20 | 250.04 | 1.32 | 241.77 | 0.94 |
| L | 30 | 249.88 | 1.73 | 236.88 | 0.71 |
| L | 40 | 247.40 | 1.77 | 227.21 | 1.47 |
| L | 50 | 248.89 | 1.51 | 227.66 | 1.02 |
| L | 60 | 244.23 | 1.42 | 216.55 | 1.16 |
| L | 70 | 230.17 | 1.78 | 194.16 | 1.12 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 13.35 | 16.27 | 17.17 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.5 | 21.5 | 25.3 | 22.6 | 21.6 | 19.6 |

* Grass cover only

Date: 8/19/81

Time: 0910-0930

Plot No.: 291

Field: Wheat*

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | | | | |
| X | 20 | | | | |
| X | 30 | | | | |
| X | 40 | | | | |
| X | 50 | | | | |
| X | 60 | | | | |
| X | 70 | | | | |
| C | 10 | 274.45 | 0.33 | 274.42 | 0.33 |
| C | 20 | 275.64 | 0.34 | 273.72 | 0.38 |
| C | 30 | 275.91 | 0.31 | 273.22 | 0.35 |
| C | 40 | 276.45 | 0.31 | 271.77 | 0.25 |
| C | 50 | 277.59 | 0.29 | 272.06 | 0.23 |
| C | 60 | 277.87 | 0.37 | 271.94 | 0.28 |
| C | 70 | 274.73 | 0.34 | 265.90 | 0.32 |
| L | 10 | 259.01 | 1.31 | 250.28 | 1.47 |
| L | 20 | 259.55 | 1.85 | 249.64 | 1.26 |
| L | 30 | 258.97 | 1.54 | 246.39 | 1.17 |
| L | 40 | 255.89 | 1.91 | 241.30 | 1.27 |
| L | 50 | 253.88 | 1.51 | 238.99 | 1.44 |
| L | 60 | 246.71 | 2.25 | 231.29 | 1.20 |
| L | 70 | 228.82 | 1.61 | 200.58 | 1.15 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 11.83 | 14.63 | 16.41 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 21.0 | 18.9 | 19.2 | 18.7 | 20.0 | 18.5 |

* Grass cover only

Date: 8/20/81

Time: 0907-0932

Plot No.: 291

Field: Wheat*

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 277.36 | 0.93 | 276.97 | 0.46 |
| X | 20 | 277.50 | 0.84 | 276.87 | 0.56 |
| X | 30 | 277.19 | 0.86 | 276.05 | 0.55 |
| X | 40 | 275.38 | 0.90 | 273.09 | 0.54 |
| X | 50 | 274.59 | 0.82 | 270.55 | 0.49 |
| X | 60 | 272.78 | 0.77 | 267.88 | 0.52 |
| X | 70 | 269.75 | 0.77 | 263.81 | 0.58 |
| C | 10 | 271.21 | 0.26 | 271.58 | 0.30 |
| C | 20 | 273.07 | 0.26 | 271.40 | 0.33 |
| C | 30 | 274.12 | 0.40 | 271.00 | 0.30 |
| C | 40 | 275.28 | 0.29 | 269.69 | 0.31 |
| C | 50 | 277.72 | 0.25 | 269.79 | 0.34 |
| C | 60 | 278.37 | 0.38 | 270.06 | 0.32 |
| C | 70 | 275.30 | 0.29 | 267.18 | 0.37 |
| L | 10 | 255.36 | 1.95 | 248.10 | 1.29 |
| L | 20 | 258.04 | 1.79 | 248.31 | 1.23 |
| L | 30 | 257.50 | 1.35 | 244.17 | 1.23 |
| L | 40 | 256.60 | 2.18 | 239.39 | 1.69 |
| L | 50 | 254.11 | 1.22 | 239.72 | 1.52 |
| L | 60 | 247.65 | 1.50 | 221.03 | 1.00 |
| L | 70 | 231.64 | 1.54 | 205.49 | 1.09 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| | 11.51 | 14.44 | 15.40 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 21.8 | 18.1 | 19.6 | 18.1 | 19.2 | 18.7 |

* Grass cover only

Date: 6/29/81

Time: 1127-1155

Plot No.: 231

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 292.90 | 0.78 | 293.27 | — |
| X | 20 | 293.03 | 0.94 | 290.22 | — |
| X | 30 | 293.56 | — | 286.00 | — |
| X | 40 | 295.12 | 1.05 | 280.09 | 0.74 |
| X | 50 | 295.42 | — | 271.91 | 0.89 |
| X | 60 | 292.27 | 0.16 | 258.06 | — |
| X | 70 | 282.14 | — | 240.09 | — |
| C | 10 | 286.51 | — | 288.15 | 0.68 |
| C | 20 | 287.78 | 0.72 | 285.39 | — |
| C | 30 | 289.62 | 0.86 | 281.10 | — |
| C | 40 | 292.06 | — | 275.05 | — |
| C | 50 | 293.48 | — | 266.09 | 0.35 |
| C | 60 | 290.73 | — | 250.37 | 0.71 |
| C | 70 | 278.23 | 0.90 | 231.17 | 0.44 |
| L | 10 | 266.47 | 2.12 | 264.24 | 1.51 |
| L | 20 | 265.72 | 1.86 | 257.38 | 0.67 |
| L | 30 | 266.85 | 1.66 | 248.48 | 1.37 |
| L | 40 | 266.76 | 1.43 | 236.76 | 0.95 |
| L | 50 | 266.49 | 1.75 | 222.57 | 1.54 |
| L | 60 | 261.45 | 1.76 | 190.03 | 0.90 |
| L | 70 | 247.62 | 1.37 | 166.75 | 1.14 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.64 | 9.17 | 14.83 | 15.66 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.7 | 40.3 | 32.8 | 31.2 | 29.9 | 25.8 |

Date: 6/29/81

Time: 1345-1414

Plot No.: 231

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 288.58 | 0.42 | 287.31 | 1.01 |
| X | 20 | 293.23 | 1.12 | 288.47 | 0.79 |
| X | 30 | 293.12 | 0.25 | 284.91 | — |
| X | 40 | 293.41 | 0.86 | 279.07 | 0.48 |
| X | 50 | 293.79 | 1.04 | 270.12 | 0.51 |
| X | 60 | 291.14 | — | 259.79 | 0.58 |
| X | 70 | 284.10 | 0.80 | 250.86 | 0.32 |
| C | 10 | 291.49 | — | 292.20 | 0.66 |
| C | 20 | 293.31 | 0.44 | 290.92 | 0.18 |
| C | 30 | 294.46 | — | 288.33 | — |
| C | 40 | 295.98 | — | 284.19 | — |
| C | 50 | 297.83 | 0.79 | 278.97 | 0.43 |
| C | 60 | 296.24 | — | 270.06 | 0.63 |
| C | 70 | 287.94 | — | 255.34 | — |
| L | 10 | 271.00 | 1.43 | 267.70 | 1.51 |
| L | 20 | 272.81 | 1.53 | 267.13 | 0.85 |
| L | 30 | 271.77 | 1.29 | 260.00 | 1.07 |
| L | 40 | 270.05 | 1.85 | 250.52 | 1.17 |
| L | 50 | 267.84 | 1.74 | 236.85 | 0.91 |
| L | 60 | 261.74 | 2.05 | 215.21 | 1.38 |
| L | 70 | 249.58 | 1.79 | 184.71 | 0.98 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 3.93 | 8.90 | 12.57 | 14.95 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.8 | 34.0 | 37.8 | 35.5 | 34.6 | 30.0 |

Date: 6/30/81

Time: 0854-0919

Plot No.: 231

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 276.82 | — | 274.75 | 1.08 |
| X | 20 | 275.87 | 1.17 | 270.62 | — |
| X | 30 | 277.73 | 0.85 | 267.02 | 0.57 |
| X | 40 | 281.04 | 0.70 | 263.29 | 0.92 |
| X | 50 | 282.86 | 0.54 | 259.33 | — |
| X | 60 | 282.99 | 0.54 | 255.55 | 0.44 |
| X | 70 | 277.68 | 0.62 | 247.33 | 0.93 |
| C | 10 | 273.56 | 0.41 | 272.58 | 0.76 |
| C | 20 | 274.60 | 0.47 | 270.49 | 0.62 |
| C | 30 | 277.21 | 0.43 | 268.18 | — |
| C | 40 | 280.92 | 0.69 | 264.77 | 0.57 |
| C | 50 | 284.06 | 0.44 | 259.35 | 0.41 |
| C | 60 | 284.84 | 0.40 | 250.78 | — |
| C | 70 | 278.39 | — | 239.04 | 0.17 |
| L | 10 | 268.97 | 1.21 | 265.14 | 1.57 |
| L | 20 | 267.14 | 1.63 | 259.18 | 1.16 |
| L | 30 | 268.10 | 1.45 | 252.34 | 1.08 |
| L | 40 | 266.37 | 1.98 | 242.90 | 0.95 |
| L | 50 | 264.27 | 2.00 | 228.63 | 1.35 |
| L | 60 | 259.56 | 1.66 | 207.55 | 1.24 |
| L | 70 | 248.32 | 1.72 | 175.99 | 1.07 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.10 | 9.84 | 13.41 | 15.36 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.0 | 25.4 | 24.2 | 23.0 | 24.1 | 23.6 |

Date: 7/2/81

Time: 0854-0921

Plot No.: 231

Field: Corn (1)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 226.93 | 0.24 | 219.92 | 0.68 |
| X | 20 | 227.05 | — | 213.08 | 0.56 |
| X | 30 | 232.75 | 1.11 | 209.62 | 0.71 |
| X | 40 | 241.27 | 0.61 | 209.17 | 1.18 |
| X | 50 | 249.50 | — | 204.81 | 0.31 |
| X | 60 | 256.71 | 0.53 | 199.12 | — |
| X | 70 | 259.33 | — | 200.09 | 0.56 |
| C | 10 | 217.94 | — | 214.86 | 0.22 |
| C | 20 | 218.94 | 0.41 | 211.66 | — |
| C | 30 | 224.49 | — | 207.68 | 0.53 |
| C | 40 | 230.95 | — | 203.24 | 0.51 |
| C | 50 | 241.29 | 1.08 | 197.53 | 0.33 |
| C | 60 | 250.77 | — | 195.06 | — |
| C | 70 | 255.56 | — | 194.47 | — |
| L | 10 | 220.94 | 1.68 | 213.47 | 1.21 |
| L | 20 | 222.93 | 1.80 | 206.71 | 0.93 |
| L | 30 | 225.88 | 1.77 | 196.43 | 1.04 |
| L | 40 | 229.41 | 1.24 | 186.42 | 1.25 |
| L | 50 | 232.42 | 1.62 | 171.91 | 1.43 |
| L | 60 | 237.09 | 1.45 | 158.70 | 1.14 |
| L | 70 | 235.64 | 1.27 | 134.24 | 1.13 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 20.89 | 19.35 | 19.25 | 18.07 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.7 | 25.3 | 22.7 | 22.5 | 23.7 | 21.8 |

Date: 7/6/81

Time: 1330-1405

Plot No.: 231

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 238.35 | 0.88 | 232.56 | 0.87 |
| X | 20 | 245.57 | 0.39 | 235.57 | — |
| X | 30 | 249.89 | 0.64 | 236.01 | — |
| X | 40 | 254.93 | 0.47 | 233.63 | 0.71 |
| X | 50 | 258.80 | 0.72 | 232.11 | 0.65 |
| X | 60 | 262.61 | — | 235.03 | 0.44 |
| X | 70 | 262.92 | 0.87 | 235.40 | — |
| C | 10 | 228.70 | 0.31 | 226.68 | 0.25 |
| C | 20 | 232.85 | — | 226.24 | 0.60 |
| C | 30 | 239.48 | 0.71 | 224.22 | — |
| C | 40 | 247.17 | — | 222.89 | — |
| C | 50 | 256.23 | 0.92 | 222.64 | 0.68 |
| C | 60 | 264.99 | 0.79 | 224.92 | 0.39 |
| C | 70 | 267.95 | — | 227.26 | — |
| L | 10 | 224.60 | 1.69 | 218.81 | 1.33 |
| L | 20 | 226.43 | 1.72 | 214.42 | 1.25 |
| L | 30 | 233.74 | 2.21 | 204.42 | 1.08 |
| L | 40 | 235.20 | 1.48 | 196.63 | 1.19 |
| L | 50 | 240.58 | 1.07 | 188.94 | 1.03 |
| L | 60 | 247.78 | 2.27 | 176.73 | 1.21 |
| L | 70 | 243.17 | 1.65 | 162.44 | 1.14 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 21.37 | 21.24 | 21.47 | 21.43 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.1 | 31.9 | 29.3 | 27.7 | 28.8 | 25.6 |

Date: 7/7/81

Time: 1420-1445

Plot No.: 231

Field: Corn (I)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 249.45 | 0.16 | 244.13 | 0.80 |
| X | 20 | 252.83 | — | 243.20 | 0.51 |
| X | 30 | 260.33 | — | 240.63 | 0.27 |
| X | 40 | 267.30 | 0.72 | 233.82 | 0.59 |
| X | 50 | 274.02 | 0.88 | 228.18 | — |
| X | 60 | 278.38 | 0.57 | 220.22 | — |
| X | 70 | 278.74 | — | 214.03 | 0.19 |
| C | 10 | 252.57 | 0.21 | 251.78 | 0.80 |
| C | 20 | 254.09 | 0.48 | 249.58 | 0.84 |
| C | 30 | 259.94 | 0.66 | 246.73 | 0.52 |
| C | 40 | 266.66 | 0.99 | 243.62 | 0.64 |
| C | 50 | 273.10 | 0.42 | 237.78 | 0.74 |
| C | 60 | 278.19 | 0.61 | 234.15 | 0.81 |
| C | 70 | 277.12 | — | 231.66 | — |
| L | 10 | | | | |
| L | 20 | | | | |
| L | 30 | | | | |
| L | 40 | | | | |
| L | 50 | | | | |
| L | 60 | | | | |
| L | 70 | | | | |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 11.25 | 12.36 | 16.02 | 16.99 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 32.6 | 38.5 | 31.5 | 31.1 | 32.4 | 29.6 |

Date: 7/8/81

Time: 1215-1244

Plot No.: 231

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 274.50 | 0.48 | 271.90 | 0.88 |
| X | 20 | 278.72 | 0.85 | 275.07 | 0.98 |
| X | 30 | 278.42 | — | 272.76 | — |
| X | 40 | 281.50 | 0.47 | 270.28 | 1.09 |
| X | 50 | 280.59 | 1.11 | 264.69 | 0.89 |
| X | 60 | 280.62 | 0.82 | 263.44 | — |
| X | 70 | 276.62 | — | 259.27 | 0.47 |
| C | 10 | 269.44 | — | 268.08 | — |
| C | 20 | 272.97 | 0.39 | 268.14 | — |
| C | 30 | 276.35 | 0.30 | 267.45 | — |
| C | 40 | 280.35 | 0.54 | 266.16 | 0.83 |
| C | 50 | 283.51 | 0.53 | 263.32 | 0.38 |
| C | 60 | 284.87 | — | 259.85 | — |
| C | 70 | 282.60 | — | 257.55 | — |
| L | 10 | 264.47 | 1.65 | 257.25 | 1.23 |
| L | 20 | 260.40 | 1.80 | 250.93 | 1.38 |
| L | 30 | 267.45 | — | 245.00 | — |
| L | 40 | 263.74 | 1.51 | 237.13 | 0.89 |
| L | 50 | 263.94 | 1.81 | 227.51 | 1.56 |
| L | 60 | 263.16 | — | 214.16 | — |
| L | 70 | 256.16 | 1.74 | 203.09 | 1.23 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 8.75 | 12.97 | 14.27 | 14.33 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 32.2 | 37.0 | 32.5 | 31.7 | 29.6 | 26.4 |

Date: 7/8/81

Time: 1258-1321

Plot No.: 231

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 259.86 | 0.60 | 256.20 | — |
| X | 20 | 260.47 | 0.80 | 250.91 | 0.99 |
| X | 30 | 267.99 | 0.23 | 250.93 | 0.65 |
| X | 40 | 275.55 | 0.88 | 248.74 | — |
| X | 50 | 280.11 | 0.71 | 248.00 | 0.49 |
| X | 60 | 282.70 | 0.65 | 241.66 | 0.61 |
| X | 70 | 274.88 | — | 239.06 | 0.94 |
| C | 10 | 265.15 | 0.84 | 265.26 | — |
| C | 20 | 266.82 | 0.93 | 263.26 | — |
| C | 30 | 270.82 | 0.85 | 261.23 | 0.26 |
| C | 40 | 275.68 | — | 257.92 | 0.66 |
| C | 50 | 280.33 | 0.31 | 253.65 | 0.93 |
| C | 60 | 281.72 | — | 248.07 | — |
| C | 70 | 277.79 | — | 244.15 | — |
| L | 10 | 262.03 | 0.94 | 258.01 | 1.37 |
| L | 20 | 258.47 | 1.46 | 251.09 | 2.18 |
| L | 30 | 260.82 | 1.44 | 243.76 | 1.09 |
| L | 40 | 262.62 | 1.40 | 236.62 | 0.89 |
| L | 50 | 265.52 | 2.01 | 228.61 | 1.09 |
| L | 60 | 264.83 | 2.05 | 216.46 | 0.98 |
| L | 70 | 253.52 | 1.79 | 210.43 | 1.22 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 8.75 | 12.97 | 14.27 | 14.33 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 32.2 | 37.0 | 32.5 | 31.7 | 29.6 | 26.4 |

Date: 7/30/81

Time: 0859-0930

Plot No.: 231

Field: Corn (1)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 266.20 | 0.93 | 266.29 | — |
| X | 20 | 270.79 | 0.40 | 269.76 | — |
| X | 30 | 269.77 | — | 267.52 | 0.78 |
| X | 40 | 270.48 | 0.91 | 266.20 | — |
| X | 50 | 269.73 | — | 264.10 | 0.71 |
| X | 60 | 266.50 | 1.01 | 260.15 | 0.68 |
| X | 70 | 261.54 | 1.11 | 252.91 | 0.69 |
| C | 10 | 264.91 | 0.67 | 266.10 | 0.55 |
| C | 20 | 267.73 | 0.10 | 268.84 | — |
| C | 30 | 269.64 | 0.69 | 269.40 | — |
| C | 40 | 271.34 | — | 268.56 | — |
| C | 50 | 272.79 | — | 268.30 | 0.27 |
| C | 60 | 271.32 | 0.97 | 265.10 | 0.55 |
| C | 70 | 265.95 | — | 258.51 | 0.63 |
| L | 10 | | | | |
| L | 20 | | | | |
| L | 30 | | | | |
| L | 40 | | | | |
| L | 50 | | | | |
| L | 60 | | | | |
| L | 70 | | | | |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 15.66 | 16.95 | 16.76 | 16.70 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 20.5 | 21.7 | 19.7 | 19.8 | 20.5 | 19.7 |

Date: 7/30/81

Time: 1010-1041

Plot No.: 231

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 266.14 | 0.66 | 266.92 | — |
| X | 20 | 269.50 | 0.10 | 267.80 | 1.24 |
| X | 30 | 272.38 | — | 269.64 | — |
| X | 40 | 271.57 | 0.88 | 265.82 | 0.24 |
| X | 50 | 274.15 | 1.13 | 266.65 | 0.55 |
| X | 60 | 269.37 | 1.28 | 261.43 | — |
| X | 70 | 264.70 | 0.63 | 253.56 | 1.07 |
| C | 10 | 270.55 | — | 271.53 | 0.76 |
| C | 20 | 271.67 | 0.54 | 271.30 | 0.23 |
| C | 30 | 273.33 | — | 270.78 | — |
| C | 40 | 275.38 | 0.48 | 269.76 | — |
| C | 50 | 275.79 | — | 268.24 | 0.43 |
| C | 60 | 274.30 | 0.94 | 265.10 | 0.23 |
| C | 70 | 269.11 | — | 258.37 | — |
| L | 10 | | | | |
| L | 20 | | | | |
| L | 30 | | | | |
| L | 40 | | | | |
| L | 50 | | | | |
| L | 60 | | | | |
| L | 70 | | | | |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 14.38 | 15.11 | 14.45 | 15.49 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.2 | 26.4 | 21.4 | 21.1 | 21.0 | 19.8 |

Date: 7/30/81

Time: 1430-1455

Plot No.: 231

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 274.88 | — | 259.98 | 0.55 |
| X | 20 | 272.74 | 0.71 | 262.07 | 1.03 |
| X | 30 | 271.31 | 0.50 | 265.46 | — |
| X | 40 | 269.64 | 0.87 | 266.95 | 0.70 |
| X | 50 | 277.25 | 1.09 | 248.93 | 1.00 |
| X | 60 | 281.22 | — | 236.51 | — |
| X | 70 | — | — | — | — |
| C | 10 | 276.98 | — | 278.69 | 0.72 |
| C | 20 | 277.32 | — | 277.26 | 0.46 |
| C | 30 | 279.04 | 0.61 | 277.10 | 0.78 |
| C | 40 | 280.84 | 0.70 | 276.35 | — |
| C | 50 | 281.48 | — | 274.25 | — |
| C | 60 | 279.22 | — | 270.48 | — |
| C | 70 | — | — | — | — |
| L | 10 | 277.37 | 1.27 | 275.14 | 1.42 |
| L | 20 | 275.53 | 1.89 | 268.31 | 1.20 |
| L | 30 | 276.34 | 1.83 | 264.54 | 1.27 |
| L | 40 | 275.69 | 1.71 | 264.23 | 1.46 |
| L | 50 | 275.27 | 1.68 | 260.68 | 1.37 |
| L | 60 | 270.00 | 1.53 | 259.77 | 1.22 |
| L | 70 | — | — | — | — |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 13.48 | 11.83 | 13.50 | 14.49 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.3 | 30.9 | 32.8 | 29.8 | 29.0 | 25.1 |

Date: 7/30/81

Time: 1457-1522

Plot No.: 231

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | | | | |
| X | 20 | | | | |
| X | 30 | | | | |
| X | 40 | | | | |
| X | 50 | | | | |
| X | 60 | | | | |
| X | 70 | | | | |
| C | 10 | 278.25 | — | 279.08 | 0.83 |
| C | 20 | 279.15 | — | 279.25 | — |
| C | 30 | 280.80 | — | 279.38 | 0.59 |
| C | 40 | 282.49 | — | 279.06 | — |
| C | 50 | 281.63 | 0.85 | 276.61 | 0.36 |
| C | 60 | 279.33 | 0.71 | 272.74 | 0.48 |
| C | 70 | 274.85 | 0.54 | 266.00 | — |
| L | 10 | 278.99 | 1.35 | 272.85 | 1.68 |
| L | 20 | 280.04 | 1.66 | 268.79 | 1.37 |
| L | 30 | 279.70 | 2.21 | 265.64 | 1.39 |
| L | 40 | 275.79 | 1.58 | 261.17 | 1.08 |
| L | 50 | 271.57 | 1.16 | 257.39 | 1.32 |
| L | 60 | 266.67 | 1.62 | 253.72 | 1.18 |
| L | 70 | 258.21 | 1.55 | 252.01 | 1.28 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 13.56 | 9.74 | 10.57 | 13.35 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.0 | 25.5 | 27.5 | 25.4 | 26.0 | 24.2 |

Date: 7/31/81

Time: 1015-1040

Plot No.: 231

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 274.80 | — | 274.02 | 0.49 |
| X | 20 | 270.96 | 0.59 | 269.88 | 1.06 |
| X | 30 | 273.45 | 0.83 | 269.70 | 0.78 |
| X | 40 | 273.45 | 0.61 | 267.99 | — |
| X | 50 | 273.19 | 0.24 | 265.82 | 0.30 |
| X | 60 | 271.94 | — | 263.09 | — |
| X | 70 | 267.63 | 0.71 | 258.04 | — |
| C | 10 | 277.40 | — | 277.36 | — |
| C | 20 | 278.07 | 0.94 | 276.49 | — |
| C | 30 | 278.92 | 0.39 | 275.82 | 0.30 |
| C | 40 | 280.46 | 0.25 | 274.80 | 0.10 |
| C | 50 | 280.59 | 0.82 | 273.13 | — |
| C | 60 | 278.94 | 0.72 | 269.16 | 0.58 |
| C | 70 | 272.50 | 0.39 | 261.84 | 0.85 |
| L | 10 | 273.20 | 1.62 | 271.21 | 1.82 |
| L | 20 | 271.86 | 1.26 | 262.78 | 1.58 |
| L | 30 | 273.44 | 0.90 | 260.72 | 1.16 |
| L | 40 | 273.08 | 1.78 | 258.87 | 0.61 |
| L | 50 | 271.77 | 1.04 | 256.92 | 1.08 |
| L | 60 | 266.81 | 2.18 | 255.28 | 1.33 |
| L | 70 | 257.63 | 1.46 | 256.42 | 1.18 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 8.02 | 10.30 | 11.21 | 12.37 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.1 | 23.6 | 23.8 | 21.6 | 22.1 | 20.9 |

Date: 7/31/81

Time: 1046-1100

Plot No.: 231

Field: Corn (1)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 276.47 | 0.88 | 276.74 | 0.62 |
| X | 20 | 277.04 | — | 276.73 | 0.84 |
| X | 30 | 276.93 | 0.40 | 274.09 | 0.38 |
| X | 40 | 273.95 | — | 269.69 | — |
| X | 50 | 271.64 | 0.44 | 265.51 | — |
| X | 60 | 268.31 | 1.17 | 261.64 | 0.63 |
| X | 70 | 261.22 | 0.56 | 250.77 | 0.82 |
| C | 10 | 276.97 | 1.00 | 278.34 | — |
| C | 20 | 279.47 | — | 279.74 | 0.38 |
| C | 30 | 281.20 | — | 280.05 | 0.96 |
| C | 40 | 282.07 | 0.35 | 278.73 | 0.63 |
| C | 50 | 281.95 | 0.81 | 276.35 | — |
| C | 60 | 279.35 | 0.79 | 272.68 | 0.33 |
| C | 70 | 274.67 | — | 265.72 | 0.75 |
| L | 10 | 273.20 | 1.97 | 266.63 | 1.74 |
| L | 20 | 277.49 | 1.78 | 268.33 | 1.14 |
| L | 30 | 277.71 | 1.91 | 265.90 | 1.32 |
| L | 40 | 274.71 | 1.55 | 261.76 | 1.40 |
| L | 50 | 271.04 | 1.30 | 256.93 | 1.71 |
| L | 60 | 265.55 | 1.68 | 253.86 | 1.30 |
| L | 70 | 257.38 | 1.23 | 249.89 | 0.79 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 8.27 | 8.70 | 10.30 | 10.60 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.2 | 26.1 | 27.1 | 26.3 | 25.8 | 22.1 |

Date: 8/10/81

Time: 1015-1038

Plot No.: 231

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 277.40 | 0.36 | 275.19 | 0.87 |
| X | 20 | 279.99 | — | 276.31 | 1.10 |
| X | 30 | 280.88 | 0.60 | 275.72 | — |
| X | 40 | 280.90 | 0.35 | 275.31 | 0.23 |
| X | 50 | 281.24 | 0.56 | 272.54 | — |
| X | 60 | 278.71 | 1.09 | 269.97 | — |
| X | 70 | 274.19 | 0.38 | 264.47 | 1.02 |
| C | 10 | 282.98 | — | 283.28 | 0.88 |
| C | 20 | 283.44 | 0.66 | 282.84 | 0.67 |
| C | 30 | 284.53 | 0.74 | 281.68 | — |
| C | 40 | 285.97 | 0.59 | 279.73 | — |
| C | 50 | 286.63 | — | 278.00 | — |
| C | 60 | 284.76 | 0.92 | 273.15 | 0.94 |
| C | 70 | 278.99 | — | 266.29 | 0.50 |
| L | 10 | 278.10 | 4.72 | 274.75 | 1.05 |
| L | 20 | 277.32 | 1.97 | 270.48 | 1.40 |
| L | 30 | 277.76 | 1.69 | 268.37 | 1.55 |
| L | 40 | 276.96 | 1.64 | 264.58 | 1.10 |
| L | 50 | 275.04 | 1.53 | 262.83 | 1.28 |
| L | 60 | 272.01 | 2.11 | 261.34 | 1.27 |
| L | 70 | 261.78 | 1.63 | 259.64 | 1.18 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 4.86 | 8.15 | 11.03 | 10.64 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.6 | 27.7 | 25.7 | 24.2 | 24.5 | 23.5 |

Date: 8/10/81

Time: 1150-1220

Plot No.: 231

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 288.41 | — | 287.72 | — |
| X | 20 | 288.51 | 0.92 | 286.15 | 1.01 |
| X | 30 | 288.62 | 0.85 | 284.45 | 0.95 |
| X | 40 | 287.29 | 0.45 | 281.67 | 0.95 |
| X | 50 | 285.02 | — | 278.47 | 0.50 |
| X | 60 | 282.91 | 1.20 | 273.95 | — |
| X | 70 | 277.32 | 0.95 | 264.40 | — |
| C | 10 | 284.64 | 0.82 | 285.52 | 1.20 |
| C | 20 | 285.13 | 0.89 | 284.31 | — |
| C | 30 | 286.17 | — | 283.66 | 0.45 |
| C | 40 | 287.01 | 1.06 | 282.98 | — |
| C | 50 | 287.36 | — | 280.82 | — |
| C | 60 | 285.28 | — | 275.94 | 0.76 |
| C | 70 | 279.69 | — | 269.61 | — |
| L | 10 | 280.93 | 1.76 | 275.79 | 1.50 |
| L | 20 | 281.39 | 1.67 | 273.68 | 0.50 |
| L | 30 | 281.71 | 1.57 | 271.12 | 1.07 |
| L | 40 | 277.90 | 1.45 | 267.22 | 1.30 |
| L | 50 | 273.89 | 1.39 | 263.76 | 1.23 |
| L | 60 | 268.43 | 1.70 | 259.60 | 1.41 |
| L | 70 | 259.49 | 1.52 | 253.97 | 1.07 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.37 | 8.09 | 10.19 | 12.84 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 31.9 | 34.9 | 31.6 | 28.2 | 28.2 | 24.8 |

Date: 8/11/81

Time: 1035-1100

Plot No.: 231

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 283.17 | — | 280.99 | — |
| X | 20 | 281.46 | 0.91 | 277.36 | 0.54 |
| X | 30 | 286.05 | 0.74 | 279.97 | 0.54 |
| X | 40 | 286.63 | 0.83 | 277.60 | 0.81 |
| X | 50 | 285.59 | 0.56 | 275.61 | — |
| X | 60 | 282.88 | 1.06 | 273.17 | 0.33 |
| X | 70 | 279.37 | 0.21 | 268.67 | 0.48 |
| C | 10 | 282.60 | 0.53 | 284.94 | 0.75 |
| C | 20 | 285.33 | 0.46 | 284.94 | 0.32 |
| C | 30 | 286.53 | — | 284.08 | 0.98 |
| C | 40 | 287.58 | 0.31 | 282.25 | 0.12 |
| C | 50 | 288.52 | — | 280.05 | — |
| C | 60 | 286.85 | 0.19 | 276.28 | 0.89 |
| C | 70 | 280.44 | — | 268.58 | 0.96 |
| L | 10 | 278.28 | 1.30 | 275.15 | 1.20 |
| L | 20 | 278.91 | 1.75 | 272.35 | 1.19 |
| L | 30 | 280.01 | 1.41 | 269.37 | 1.40 |
| L | 40 | 277.37 | 1.28 | 266.31 | 1.58 |
| L | 50 | 276.74 | 1.87 | 264.95 | 0.94 |
| L | 60 | 270.65 | 1.72 | 261.75 | 1.59 |
| L | 70 | 258.56 | 1.64 | 257.87 | 1.79 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.04 | 6.89 | 8.74 | 9.30 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.8 | 29.9 | 29.4 | 26.6 | 26.3 | 24.3 |

Date: 8/11/81

Time: 1107-1130

Plot No.: 231

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 284.76 | — | 283.44 | 0.67 |
| X | 20 | 281.42 | 0.91 | 278.54 | 0.91 |
| X | 30 | 282.44 | 0.97 | 278.47 | 0.30 |
| X | 40 | 281.39 | — | 275.64 | — |
| X | 50 | 281.26 | 0.91 | 274.73 | 1.19 |
| X | 60 | 281.05 | 0.70 | 273.09 | — |
| X | 70 | 274.74 | — | 263.95 | 0.42 |
| C | 10 | 282.38 | — | 283.86 | 0.78 |
| C | 20 | 284.20 | 1.08 | 283.82 | — |
| C | 30 | 285.89 | 0.73 | 284.20 | 0.21 |
| C | 40 | 287.36 | — | 283.50 | 0.75 |
| C | 50 | 287.70 | 0.69 | 281.39 | 0.53 |
| C | 60 | 287.10 | 0.54 | 279.19 | — |
| C | 70 | 281.54 | 0.75 | 271.06 | 0.53 |
| L | 10 | 277.85 | 2.30 | 272.83 | 1.22 |
| L | 20 | 278.75 | 1.29 | 271.33 | 0.79 |
| L | 30 | 278.27 | 1.29 | 267.90 | 1.01 |
| L | 40 | 277.91 | 1.48 | 266.33 | 1.40 |
| L | 50 | 275.39 | 2.13 | 264.31 | 0.31 |
| L | 60 | 271.39 | 1.62 | 261.18 | 1.10 |
| L | 70 | 258.93 | 1.80 | 256.13 | 1.43 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.52 | 7.00 | 9.42 | 11.40 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.8 | 30.6 | 30.9 | 28.2 | 28.1 | 25.3 |

Date: 8/13/81

Time: 1035-1103

Plot No.: 231

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | | | | |
| X | 20 | | | | |
| X | 30 | 273.73 | 0.37 | 265.76 | — |
| X | 40 | 271.95 | — | 263.09 | 0.85 |
| X | 50 | 274.73 | — | 263.16 | 0.35 |
| X | 60 | 274.56 | 0.98 | 262.26 | 0.63 |
| X | 70 | 269.94 | 0.97 | 258.10 | 1.00 |
| C | 10 | | | | |
| C | 20 | | | | |
| C | 30 | 272.54 | — | 267.17 | 0.92 |
| C | 40 | 275.86 | — | 268.19 | — |
| C | 50 | 277.97 | — | 268.25 | — |
| C | 60 | 278.95 | 0.55 | 267.57 | 0.78 |
| C | 70 | 274.40 | 0.20 | 262.19 | — |
| L | 10 | | | | |
| L | 20 | | | | |
| L | 30 | 266.84 | 1.39 | 255.37 | 1.08 |
| L | 40 | 267.95 | 1.82 | 252.93 | 0.81 |
| L | 50 | 270.02 | 2.25 | 252.58 | 1.20 |
| L | 60 | 268.93 | 2.88 | 256.70 | 2.42 |
| L | 70 | 257.91 | 1.73 | 254.43 | 1.07 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 16.92 | 16.64 | 15.72 | 13.29 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.5 | 25.1 | 23.5 | 22.6 | 23.2 | 21.3 |

Date: 8/13/81

Time: 1108-1136

Plot No.: 231

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 273.17 | 1.34 | 270.25 | 0.98 |
| X | 20 | 274.91 | 0.99 | 270.73 | 0.95 |
| X | 30 | 275.44 | — | 269.29 | — |
| X | 40 | 275.93 | 1.07 | 268.48 | 0.59 |
| X | 50 | 277.46 | 1.14 | 270.43 | — |
| X | 60 | 276.39 | 0.77 | 268.20 | 0.86 |
| X | 70 | 271.69 | 0.72 | 264.17 | 0.81 |
| C | 10 | 268.43 | 0.10 | 267.95 | 0.25 |
| C | 20 | 272.09 | — | 270.64 | 0.39 |
| C | 30 | 275.20 | 0.80 | 271.22 | 0.54 |
| C | 40 | 277.69 | — | 271.80 | 0.92 |
| C | 50 | 279.90 | 0.92 | 272.42 | 1.06 |
| C | 60 | 279.85 | — | 269.87 | 0.80 |
| C | 70 | 275.61 | 0.56 | 264.35 | — |
| L | 10 | 267.47 | 2.46 | 257.39 | 1.35 |
| L | 20 | 272.00 | 1.50 | 257.85 | 1.45 |
| L | 30 | 271.83 | 1.13 | 254.78 | 1.33 |
| L | 40 | 276.15 | 2.97 | 250.52 | 1.02 |
| L | 50 | 268.98 | 1.78 | 251.43 | 1.15 |
| L | 60 | 264.69 | 2.11 | 250.16 | 1.40 |
| L | 70 | 257.31 | 1.77 | 248.69 | 1.10 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 16.82 | 15.64 | 15.33 | 12.80 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.8 | 25.6 | 26.6 | 25.2 | 25.5 | 22.6 |

Date: 8/14/81

Time: 0730-0802

Plot No.: 231

Field: Corn (1)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 264.47 | 1.05 | 262.83 | 0.81 |
| X | 20 | 262.93 | 0.50 | 259.33 | 0.56 |
| X | 30 | 262.75 | — | 257.67 | 0.89 |
| X | 40 | 262.89 | 0.69 | 256.63 | — |
| X | 50 | 262.63 | 0.70 | 253.90 | 0.51 |
| X | 60 | 258.56 | 0.86 | 247.30 | — |
| X | 70 | 254.58 | 0.26 | 242.39 | — |
| C | 10 | 264.22 | 0.92 | 264.49 | 0.64 |
| C | 20 | 266.21 | — | 265.89 | — |
| C | 30 | 267.74 | 0.71 | 265.18 | 0.55 |
| C | 40 | 269.30 | 0.93 | 263.79 | 0.65 |
| C | 50 | 269.02 | 0.55 | 260.84 | — |
| C | 60 | 267.29 | — | 255.54 | — |
| C | 70 | 261.56 | — | 247.59 | 0.62 |
| L | 10 | 268.33 | 1.30 | 260.24 | 1.13 |
| L | 20 | 269.29 | 1.77 | 257.94 | 1.39 |
| L | 30 | 269.06 | 1.90 | 254.70 | 1.20 |
| L | 40 | 266.95 | 1.31 | 252.36 | 1.62 |
| L | 50 | 262.90 | 2.16 | 248.27 | 1.27 |
| L | 60 | 257.38 | 1.51 | 244.54 | 1.13 |
| L | 70 | 247.71 | 1.44 | 240.93 | 1.14 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 15.10 | 16.04 | 16.54 | 16.41 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 20.6 | 19.9 | 19.6 | 19.9 | 22.0 | 22.1 |

Date: 8/14/81

Time: 1030-1050

Plot No.: 231

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 270.93 | 0.91 | 268.17 | 0.54 |
| X | 20 | 270.51 | — | 266.06 | — |
| X | 30 | 273.72 | 0.56 | 266.83 | 0.84 |
| X | 40 | 276.55 | 0.79 | 267.48 | 0.55 |
| X | 50 | 276.17 | 0.66 | 263.96 | 0.84 |
| X | 60 | 275.32 | 0.79 | 262.74 | 0.68 |
| X | 70 | 269.98 | — | 255.33 | 0.79 |
| C | 10 | 270.63 | — | 271.99 | 0.37 |
| C | 20 | 274.34 | 0.65 | 273.23 | — |
| C | 30 | 276.81 | — | 272.83 | 0.79 |
| C | 40 | 280.31 | 0.10 | 272.41 | 0.43 |
| C | 50 | 282.45 | 0.77 | 271.70 | 1.03 |
| C | 60 | 281.61 | 1.13 | 269.14 | 0.92 |
| C | 70 | 277.46 | 0.28 | 264.34 | — |
| L | 10 | 266.37 | 1.67 | 261.98 | 0.26 |
| L | 20 | 269.15 | 1.54 | 258.84 | 1.44 |
| L | 30 | 271.32 | 1.81 | 259.11 | 0.95 |
| L | 40 | 270.48 | 1.38 | 255.12 | 1.24 |
| L | 50 | 271.37 | 1.77 | 253.73 | 1.03 |
| L | 60 | — | — | 253.17 | 1.12 |
| L | 70 | 259.33 | 1.35 | 254.95 | 1.03 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 14.36 | 14.10 | 15.65 | 15.67 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.9 | 25.5 | 23.5 | 23.0 | 23.5 | 24.4 |

Date: 8/14/81

Time: 1045-1020

Plot No.: 231

Field: Corn (I)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 272.84 | 0.89 | 271.33 | 1.07 |
| X | 20 | 278.36 | 0.74 | 274.82 | 0.63 |
| X | 30 | 278.44 | 0.42 | 272.43 | 0.76 |
| X | 40 | 278.08 | 0.77 | 271.88 | — |
| X | 50 | 278.93 | 0.62 | 270.75 | 0.27 |
| X | 60 | 277.42 | 0.77 | 267.93 | 0.91 |
| X | 70 | 273.86 | 0.40 | 264.14 | — |
| C | 10 | 273.15 | — | 274.35 | 0.44 |
| C | 20 | 277.13 | 0.23 | 277.36 | 0.36 |
| C | 30 | 279.45 | — | 277.35 | 0.85 |
| C | 40 | 282.48 | — | 277.61 | 0.41 |
| C | 50 | 283.67 | 0.43 | 276.15 | 0.37 |
| C | 60 | 283.40 | — | 273.58 | 0.96 |
| C | 70 | 278.52 | 0.63 | 266.93 | — |
| L | 10 | 272.76 | 1.67 | 263.97 | 1.25 |
| L | 20 | 278.05 | 1.78 | 265.84 | 0.81 |
| L | 30 | 277.12 | 1.91 | 264.03 | 1.42 |
| L | 40 | 275.05 | 1.49 | 261.51 | 1.54 |
| L | 50 | 272.11 | 1.61 | 257.17 | 1.02 |
| L | 60 | 267.40 | 1.58 | 254.44 | 1.55 |
| L | 70 | 259.52 | 2.23 | 251.81 | 1.54 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 14.65 | 15.26 | 15.65 | 14.82 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.9 | 28.3 | 28.1 | 26.4 | 27.0 | 24.0 |

Date: 8/17/81

Time: 1050-1115

Plot No.: 231

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 267.72 | 0.56 | 266.93 | 0.66 |
| X | 20 | 273.16 | — | 270.84 | 0.80 |
| X | 30 | 274.99 | 0.53 | 270.57 | 0.89 |
| X | 40 | 275.60 | — | 268.39 | — |
| X | 50 | 274.55 | — | 265.09 | 0.56 |
| X | 60 | 271.97 | — | 262.53 | 0.68 |
| X | 70 | 272.92 | 1.18 | 258.01 | 1.15 |
| C | 10 | 270.94 | 0.41 | 272.11 | — |
| C | 20 | 272.71 | — | 271.50 | 0.76 |
| C | 30 | 274.40 | 0.27 | 271.15 | — |
| C | 40 | 276.78 | — | 269.84 | 0.46 |
| C | 50 | 278.29 | — | 267.88 | 0.86 |
| C | 60 | 277.66 | — | 265.61 | 0.27 |
| C | 70 | 272.57 | 1.08 | 262.77 | 0.83 |
| L | 10 | 267.91 | 1.27 | 265.69 | 0.80 |
| L | 20 | 269.26 | 1.54 | 262.73 | 1.08 |
| L | 30 | 270.22 | 1.87 | 260.02 | 1.25 |
| L | 40 | 269.25 | 1.58 | 256.67 | 1.17 |
| L | 50 | 268.48 | 2.01 | 254.08 | 1.24 |
| L | 60 | 264.53 | 1.71 | 252.24 | 1.56 |
| L | 70 | 258.99 | 1.65 | 251.17 | 0.94 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 11.60 | 12.85 | 15.38 | 15.20 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 20.7 | 20.7 | 20.2 | 19.8 | 20.8 | 21.6 |

Date: 8/17/81

Time: 1115-1140

Plot No.: 231

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 270.91 | 0.89 | 270.70 | 0.82 |
| X | 20 | 275.33 | 0.76 | 272.92 | 0.76 |
| X | 30 | 275.72 | 0.83 | 272.76 | 0.50 |
| X | 40 | 276.57 | — | 271.69 | 0.84 |
| X | 50 | 274.12 | 0.12 | 268.79 | 0.83 |
| X | 60 | 272.38 | — | 265.76 | 0.49 |
| X | 70 | 268.52 | — | 262.59 | — |
| C | 10 | 273.64 | — | 274.26 | — |
| C | 20 | 275.76 | 0.29 | 274.32 | — |
| C | 30 | 277.77 | — | 274.64 | 0.16 |
| C | 40 | 279.71 | — | 274.57 | 0.61 |
| C | 50 | 280.19 | 0.95 | 272.39 | — |
| C | 60 | 278.06 | — | 268.55 | 0.73 |
| C | 70 | 273.15 | — | 262.03 | 0.81 |
| L | 10 | 270.98 | 1.76 | 265.50 | 1.04 |
| L | 20 | 274.92 | 1.71 | 264.60 | — |
| L | 30 | 274.32 | 1.51 | 262.67 | 1.31 |
| L | 40 | 272.01 | 1.67 | 258.81 | 1.78 |
| L | 50 | 267.65 | 1.80 | 254.26 | 1.16 |
| L | 60 | 262.80 | 1.28 | 250.55 | 1.17 |
| L | 70 | 253.57 | 1.32 | 247.03 | 1.40 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 10.07 | 11.68 | 13.45 | 13.67 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 21.7 | 21.3 | 21.8 | 20.7 | 21.7 | 21.8 |

Date: 8/18/81

Time: 1310-1340

Plot No.: 231

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 279.57 | 1.10 | 278.06 | 0.38 |
| X | 20 | 283.72 | 0.41 | 280.60 | — |
| X | 30 | 281.40 | 0.56 | 276.09 | — |
| X | 40 | 281.86 | 0.65 | 274.63 | — |
| X | 50 | 281.09 | 0.76 | 270.64 | — |
| X | 60 | 279.40 | 0.62 | 268.77 | — |
| X | 70 | 275.89 | 0.74 | 263.20 | 0.40 |
| C | 10 | 281.23 | — | 282.89 | 0.55 |
| C | 20 | 283.00 | — | 282.10 | — |
| C | 30 | 284.05 | 0.55 | 281.41 | 0.21 |
| C | 40 | 286.06 | 0.58 | 279.56 | 0.76 |
| C | 50 | 286.39 | 0.37 | 276.91 | 0.74 |
| C | 60 | 284.33 | 0.28 | 272.80 | — |
| C | 70 | 278.85 | 0.74 | 266.42 | — |
| L | 10 | 272.33 | 2.01 | 269.69 | 1.01 |
| L | 20 | 274.24 | 1.54 | 269.18 | 1.51 |
| L | 30 | 272.66 | 1.52 | 264.02 | 1.64 |
| L | 40 | 272.35 | 2.47 | 260.14 | 1.18 |
| L | 50 | 270.30 | 1.85 | 257.99 | 0.93 |
| L | 60 | 266.16 | 1.51 | 255.21 | 1.73 |
| L | 70 | 254.54 | 1.69 | 251.39 | 1.03 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 4.92 | 10.50 | 12.75 | 13.00 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.5 | 26.3 | 25.9 | 23.4 | 23.9 | 24.0 |

Date: 8/18/81

Time: 1338-1358

Plot No.: 231

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.02 | 0.93 | 278.46 | — |
| X | 20 | 283.91 | — | 282.68 | 0.45 |
| X | 30 | 283.67 | 1.10 | 280.69 | 0.12 |
| X | 40 | 282.67 | 0.39 | 277.80 | — |
| X | 50 | 279.19 | 0.69 | 273.07 | 0.77 |
| X | 60 | 275.99 | — | 267.80 | 1.44 |
| X | 70 | 272.27 | — | 261.47 | 1.25 |
| C | 10 | 282.92 | — | 283.59 | 0.71 |
| C | 20 | 284.60 | — | 284.24 | — |
| C | 30 | 285.97 | — | 283.95 | 0.61 |
| C | 40 | 286.58 | — | 282.04 | — |
| C | 50 | 286.46 | 0.42 | 279.93 | 0.70 |
| C | 60 | 283.84 | — | 274.33 | — |
| C | 70 | 279.58 | — | 269.10 | 0.75 |
| L | 10 | 273.47 | 1.98 | 267.65 | 1.70 |
| L | 20 | 276.02 | 1.81 | 268.17 | 0.96 |
| L | 30 | 276.81 | 1.70 | 266.35 | 1.45 |
| L | 40 | 273.34 | 2.35 | 263.17 | 1.67 |
| L | 50 | 270.62 | 1.51 | 259.48 | 1.37 |
| L | 60 | 264.50 | 1.48 | 254.20 | 1.34 |
| L | 70 | 255.04 | 1.37 | 248.76 | 1.16 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 4.00 | 8.89 | 12.15 | 12.21 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.8 | 26.4 | 27.2 | 24.2 | 25.6 | 24.6 |

Date: 8/19/81

Time: 1050-1115

Plot No.: 231

Field: Corn (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.86 | 1.04 | 279.11 | 0.46 |
| X | 20 | 274.27 | 0.91 | 271.64 | 0.56 |
| X | 30 | 276.22 | 0.87 | 271.97 | 0.50 |
| X | 40 | 277.43 | 0.88 | 270.38 | 0.45 |
| X | 50 | 277.61 | 1.26 | 269.62 | 0.49 |
| X | 60 | 273.70 | 1.41 | 268.34 | 0.57 |
| X | 70 | 270.78 | 0.73 | 259.68 | 0.75 |
| C | 10 | 279.31 | 0.38 | 280.75 | 0.34 |
| C | 20 | 280.47 | 0.37 | 280.02 | 0.29 |
| C | 30 | 281.41 | 0.33 | 278.52 | 0.27 |
| C | 40 | 283.01 | 0.31 | 277.45 | 0.35 |
| C | 50 | 283.02 | 0.37 | 274.48 | 0.29 |
| C | 60 | 283.05 | 0.38 | 271.83 | 0.30 |
| C | 70 | 277.46 | 0.44 | 265.31 | 0.22 |
| L | 10 | 275.76 | 1.65 | 274.43 | 1.41 |
| L | 20 | 277.41 | 2.07 | 270.56 | 1.30 |
| L | 30 | 275.46 | 1.23 | 266.56 | 0.97 |
| L | 40 | 274.25 | 2.04 | 263.77 | 1.20 |
| L | 50 | 272.89 | 1.52 | 261.56 | 1.04 |
| L | 60 | 269.34 | 1.94 | 258.94 | 1.34 |
| L | 70 | 258.30 | 1.42 | 257.50 | 1.49 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.10 | 6.73 | 10.00 | 10.78 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.4 | 26.5 | 24.4 | 21.7 | 21.8 | 19.4 |

Date: 8/19/81

Time: 1115-1145

Plot No.: 231

Field: Corn (1)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 278.35 | 0.99 | 276.95 | 0.33 |
| X | 20 | 278.43 | 0.74 | 275.44 | 0.56 |
| X | 30 | 277.14 | 0.88 | 273.49 | 0.50 |
| X | 40 | 275.96 | 0.98 | 270.62 | 0.45 |
| X | 50 | 276.14 | 1.01 | 269.30 | 0.45 |
| X | 60 | 275.30 | 0.88 | 265.90 | 0.50 |
| X | 70 | 272.41 | 0.78 | 260.73 | 0.47 |
| C | 10 | 280.90 | 0.34 | 281.90 | 0.38 |
| C | 20 | 281.27 | 0.30 | 280.45 | 0.36 |
| C | 30 | 282.91 | 0.33 | 280.35 | 0.26 |
| C | 40 | 283.90 | 0.31 | 278.56 | 0.35 |
| C | 50 | 283.88 | 0.26 | 276.54 | 0.33 |
| C | 60 | 282.01 | 0.39 | 273.07 | 0.26 |
| C | 70 | 277.95 | 0.28 | 267.10 | 0.28 |
| L | 10 | 280.89 | 1.63 | 275.96 | 1.19 |
| L | 20 | 281.46 | 1.49 | 274.23 | 1.09 |
| L | 30 | 280.46 | 1.90 | 270.09 | 1.35 |
| L | 40 | 276.46 | 1.73 | 266.41 | 1.28 |
| L | 50 | 272.74 | 2.04 | 262.43 | 1.38 |
| L | 60 | 267.64 | 2.01 | 258.04 | 1.24 |
| L | 70 | 256.80 | 1.53 | 252.44 | 1.02 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.30 | 6.29 | 9.35 | 10.15 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 25.8 | 26.3 | 24.2 | 21.8 | 22.4 | 21.4 |

Date: 8/20/81

Time: 1049-1120

Plot No.: 231

Field: Corn (||)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 280.30 | 0.90 | 279.20 | 0.79 |
| X | 20 | 279.64 | 0.85 | 277.58 | 0.48 |
| X | 30 | 281.03 | 0.87 | 276.52 | 0.54 |
| X | 40 | 279.40 | 0.96 | 273.05 | 1.06 |
| X | 50 | 277.43 | 0.99 | 268.75 | 0.65 |
| X | 60 | 274.65 | 0.51 | 265.40 | 0.35 |
| X | 70 | 270.80 | 0.82 | 261.88 | 0.51 |
| C | 10 | 278.79 | 0.31 | 279.98 | 0.28 |
| C | 20 | 279.85 | 0.36 | 279.04 | 0.36 |
| C | 30 | 281.43 | 0.36 | 278.70 | 0.36 |
| C | 40 | 283.28 | 0.35 | 278.39 | 0.32 |
| C | 50 | 282.41 | 0.44 | 274.11 | 0.35 |
| C | 60 | 280.97 | 0.39 | 270.61 | 0.38 |
| C | 70 | 276.06 | 0.43 | 264.94 | 0.34 |
| L | 10 | 276.67 | 1.73 | 274.89 | 1.51 |
| L | 20 | 278.36 | 2.12 | 273.33 | 1.10 |
| L | 30 | 277.33 | 1.86 | 269.53 | 1.53 |
| L | 40 | 276.64 | 1.81 | 266.10 | 1.28 |
| L | 50 | 273.49 | 1.65 | 261.54 | 1.43 |
| L | 60 | 267.91 | 1.72 | 258.47 | 1.17 |
| L | 70 | 257.38 | 2.00 | 256.99 | 1.28 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.87 | 7.00 | 10.96 | 11.79 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.5 | 23.5 | 22.8 | 21.8 | 21.5 | 19.6 |

Date: 8/20/81

Time: 1122-1144

Plot No.: 231

Field: Corn (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 284.19 | 0.96 | 283.12 | 0.64 |
| X | 20 | 283.07 | 0.88 | 280.94 | 0.51 |
| X | 30 | 280.62 | 0.88 | 277.64 | 0.43 |
| X | 40 | 280.39 | 0.92 | 275.65 | 0.47 |
| X | 50 | 278.61 | 0.95 | 272.70 | 0.48 |
| X | 60 | 277.47 | 0.88 | 269.50 | 0.59 |
| X | 70 | 273.06 | 0.82 | 265.57 | 0.74 |
| C | 10 | 283.23 | 0.38 | 283.80 | 0.32 |
| C | 20 | 284.29 | 0.27 | 283.42 | 0.28 |
| C | 30 | 284.72 | 0.47 | 283.24 | 0.37 |
| C | 40 | 285.39 | 0.34 | 281.13 | 0.30 |
| C | 50 | 285.37 | 0.36 | 278.90 | 0.33 |
| C | 60 | 284.00 | 0.31 | 275.53 | 0.43 |
| C | 70 | 278.25 | 0.47 | 268.40 | 0.28 |
| L | 10 | 281.33 | 1.72 | 278.08 | 1.43 |
| L | 20 | 282.42 | 2.34 | 276.42 | 1.07 |
| L | 30 | 281.64 | 1.63 | 274.36 | 1.36 |
| L | 40 | 277.97 | 1.83 | 269.30 | 1.20 |
| L | 50 | 273.36 | 2.13 | 264.56 | 1.51 |
| L | 60 | 269.16 | 1.61 | 259.63 | 1.25 |
| L | 70 | 258.55 | 1.49 | 254.07 | 1.15 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.60 | 7.16 | 11.03 | 11.88 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.8 | 24.9 | 25.2 | 22.9 | 22.8 | 20.7 |

Date: 6/29/81

Time: 1056-1118

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 288.48 | — | 288.09 | — |
| X | 20 | 288.73 | 0.48 | 285.76 | 0.16 |
| X | 30 | 290.39 | — | 283.05 | — |
| X | 40 | 292.21 | — | 278.61 | 0.99 |
| X | 50 | 293.25 | 0.68 | 271.14 | — |
| X | 60 | 292.22 | 0.76 | 261.34 | — |
| X | 70 | 284.97 | 0.42 | 242.85 | 0.82 |
| C | 10 | 286.95 | 0.29 | 288.47 | — |
| C | 20 | 288.13 | — | 287.28 | 0.95 |
| C | 30 | 290.69 | 0.57 | 286.11 | 1.01 |
| C | 40 | 293.05 | 0.72 | 282.82 | 0.52 |
| C | 50 | 294.82 | 1.01 | 276.43 | 0.49 |
| C | 60 | 292.88 | 0.53 | 264.60 | — |
| C | 70 | 282.38 | — | 244.01 | 0.49 |
| L | 10 | 266.57 | 1.88 | 264.79 | 1.55 |
| L | 20 | 265.61 | 1.89 | 259.70 | 1.52 |
| L | 30 | 266.06 | 2.44 | 254.19 | 1.59 |
| L | 40 | 265.28 | 1.69 | 244.31 | 1.70 |
| L | 50 | 263.52 | 1.48 | 229.94 | 1.41 |
| L | 60 | 258.37 | 1.78 | 210.06 | 1.05 |
| L | 70 | 242.56 | 1.60 | 176.78 | 1.26 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 4.68 | 10.12 | 16.73 | 18.40 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.2 | 29.5 | 30.8 | 26.7 | 26.9 | 23.5 |

Date: 6/29/81

Time: 1431-1452

Plot No.: 261

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 291.55 | — | 289.99 | 0.36 |
| X | 20 | 292.11 | — | 287.81 | — |
| X | 30 | 293.23 | 0.68 | 284.00 | 0.84 |
| X | 40 | 294.15 | 1.29 | 280.23 | — |
| X | 50 | 294.35 | — | 274.07 | 0.51 |
| X | 60 | 292.68 | 0.82 | 266.97 | — |
| X | 70 | 286.28 | 0.85 | 255.74 | 0.14 |
| C | 10 | 293.37 | — | 294.29 | 0.66 |
| C | 20 | 294.29 | — | 292.74 | 0.65 |
| C | 30 | 295.53 | — | 290.15 | — |
| C | 40 | 297.77 | 0.77 | 286.61 | 0.67 |
| C | 50 | 299.08 | 0.13 | 282.15 | 1.16 |
| C | 60 | 297.91 | — | 273.83 | 0.96 |
| C | 70 | 284.92 | — | 251.67 | 0.81 |
| L | 10 | 274.05 | 1.43 | 271.77 | 1.51 |
| L | 20 | 272.83 | 1.27 | 266.25 | 0.68 |
| L | 30 | 271.27 | 2.02 | 260.30 | 1.07 |
| L | 40 | 269.83 | 1.34 | 251.50 | 1.03 |
| L | 50 | 266.12 | 1.62 | 239.99 | 0.99 |
| L | 60 | 260.38 | 1.69 | 220.71 | 1.34 |
| L | 70 | 241.38 | 1.44 | 185.85 | 0.97 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 2.04 | 11.06 | 17.69 | 17.54 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.2 | 37.3 | 39.1 | 34.8 | 33.0 | 29.4 |

Date: 6/30/81

Time: 0757-0838

Plot No.: 261

Field: Soybean (1)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 278.17 | — | 275.15 | 0.50 |
| X | 20 | 277.18 | 0.75 | 272.35 | — |
| X | 30 | 277.48 | 0.85 | 269.51 | 0.54 |
| X | 40 | 278.60 | 0.44 | 265.22 | 0.79 |
| X | 50 | 279.55 | 0.09 | 260.49 | 1.14 |
| X | 60 | 278.37 | 1.05 | 254.68 | — |
| X | 70 | 272.52 | 0.66 | 235.26 | — |
| C | 10 | 274.89 | — | 273.57 | — |
| C | 20 | 275.33 | 0.36 | 270.85 | 0.37 |
| C | 30 | 277.40 | — | 267.30 | 0.34 |
| C | 40 | 280.08 | 0.71 | 262.98 | 0.42 |
| C | 50 | 282.49 | — | 257.14 | 0.82 |
| C | 60 | 281.45 | 1.04 | 246.79 | 0.71 |
| C | 70 | 270.06 | 0.43 | 225.10 | 0.43 |
| L | 10 | 268.32 | 1.48 | 264.18 | 1.66 |
| L | 20 | 267.57 | 1.51 | 260.52 | 1.36 |
| L | 30 | 267.12 | 1.41 | 253.78 | 1.33 |
| L | 40 | 265.76 | 1.79 | 244.79 | 1.45 |
| L | 50 | 263.64 | 1.61 | 231.49 | 1.37 |
| L | 60 | 255.48 | 1.82 | 208.16 | 1.33 |
| L | 70 | 240.28 | — | 174.67 | 1.01 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.44 | 9.83 | 15.09 | 17.14 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 23.8 | 24.8 | 22.4 | 21.8 | 23.3 | 23.4 |

Date: 7/2/81

Time: 0816-0845

Plot No.: 261

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 225.38 | 0.78 | 218.74 | 0.62 |
| X | 20 | 220.00 | — | 206.00 | 0.72 |
| X | 30 | 221.31 | — | 197.32 | 0.29 |
| X | 40 | 231.48 | — | 194.40 | 0.17 |
| X | 50 | 237.74 | 0.77 | 176.75 | 0.55 |
| X | 60 | 246.36 | 0.55 | 177.02 | 0.84 |
| X | 70 | 253.17 | 0.58 | 167.01 | 0.72 |
| C | 10 | 198.56 | — | 197.44 | — |
| C | 20 | 196.14 | 0.13 | 186.64 | 0.13 |
| C | 30 | 201.96 | — | 180.39 | — |
| C | 40 | 212.46 | 0.74 | 172.51 | 0.46 |
| C | 50 | 226.73 | — | 164.13 | 0.46 |
| C | 60 | 236.95 | 0.62 | 154.31 | 0.61 |
| C | 70 | 245.74 | 0.53 | 137.41 | 0.34 |
| L | 10 | 201.32 | 1.49 | 191.38 | 1.07 |
| L | 20 | 199.13 | 1.66 | 181.58 | 0.96 |
| L | 30 | 202.22 | 1.61 | 174.64 | 1.02 |
| L | 40 | 206.52 | 1.35 | 162.06 | 0.93 |
| L | 50 | 215.05 | 1.40 | 149.28 | 1.27 |
| L | 60 | 221.52 | 1.65 | 132.57 | 1.28 |
| L | 70 | 224.70 | 1.64 | 109.10 | 1.24 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 22.12 | 23.63 | 21.64 | 21.34 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.7 | 25.1 | 23.1 | 22.7 | 23.0 | 22.6 |

Date: 7/6/81

Time: 1101-1130

Plot No.: 261

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 233.09 | 0.53 | 227.24 | 0.31 |
| X | 20 | 227.29 | 0.41 | 215.78 | 0.24 |
| X | 30 | 227.40 | 0.29 | 205.19 | 0.44 |
| X | 40 | 232.28 | 0.78 | 195.31 | 0.62 |
| X | 50 | 237.76 | — | 171.00 | 0.55 |
| X | 60 | 251.07 | 0.85 | 174.97 | 0.70 |
| X | 70 | 255.71 | — | 166.83 | 0.86 |
| C | 10 | 213.55 | — | 206.26 | — |
| C | 20 | 208.56 | — | 198.29 | 0.34 |
| C | 30 | 213.49 | — | 191.32 | 0.52 |
| C | 40 | 223.15 | — | 183.64 | 0.63 |
| C | 50 | 237.24 | — | 174.67 | 0.35 |
| C | 60 | 248.84 | 0.51 | 164.09 | 0.76 |
| C | 70 | 256.28 | 0.40 | 149.81 | 0.65 |
| L | 10 | 216.01 | 1.87 | 208.09 | 3.07 |
| L | 20 | 200.80 | 1.58 | 186.55 | 1.00 |
| L | 30 | 204.20 | 1.33 | 178.41 | 0.98 |
| L | 40 | 210.73 | 1.68 | 169.19 | 1.25 |
| L | 50 | 219.05 | 1.49 | 156.56 | 1.49 |
| L | 60 | 225.67 | 1.43 | 136.94 | 1.20 |
| L | 70 | 228.76 | 1.35 | 111.15 | 1.12 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 21.28 | 21.23 | 20.29 | 21.02 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.4 | 32.0 | 26.3 | 24.9 | 26.5 | 23.7 |

Date: 7/7/81

Time: 1447-1506

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 261.84 | 0.99 | 259.38 | 0.46 |
| X | 20 | 263.25 | — | 255.04 | 0.35 |
| X | 30 | 271.06 | 0.75 | 254.25 | 1.10 |
| X | 40 | 273.28 | — | 242.95 | 0.74 |
| X | 50 | 279.51 | 0.53 | 233.06 | 0.18 |
| X | 60 | 283.53 | — | 214.24 | — |
| X | 70 | 283.61 | — | 210.92 | — |
| C | 10 | 264.50 | 0.61 | 265.01 | — |
| C | 20 | 266.96 | 0.60 | 263.56 | 0.29 |
| C | 30 | 270.92 | — | 259.39 | — |
| C | 40 | 277.35 | 0.70 | 252.84 | 0.80 |
| C | 50 | 282.06 | — | 243.72 | 0.80 |
| C | 60 | 286.54 | 0.31 | 226.95 | — |
| C | 70 | 279.67 | 1.07 | 205.64 | 0.22 |
| L | 10 | | | | |
| L | 20 | | | | |
| L | 30 | | | | |
| L | 40 | | | | |
| L | 50 | | | | |
| L | 60 | | | | |
| L | 70 | | | | |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 7.48 | 9.72 | 14.10 | 16.89 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 32.2 | 33.5 | 31.4 | 31.8 | 33.0 | 28.0 |



Date: 7/8/81

Time: 0935-1016

Plot No.: 261

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 259.86 | 0.88 | 255.40 | — |
| X | 20 | 258.55 | — | 248.75 | — |
| X | 30 | 263.51 | — | 243.71 | 0.55 |
| X | 40 | 268.49 | — | 235.76 | — |
| X | 50 | 274.94 | 0.55 | 225.56 | 0.92 |
| X | 60 | 278.88 | 0.56 | 212.43 | — |
| X | 70 | 278.76 | — | 203.01 | 0.91 |
| C | 10 | 257.54 | 0.90 | 254.79 | 0.91 |
| C | 20 | 257.36 | 0.55 | 249.07 | — |
| C | 30 | 261.72 | — | 243.28 | 0.31 |
| C | 40 | 268.18 | 0.21 | 235.49 | 0.75 |
| C | 50 | 275.23 | — | 225.89 | — |
| C | 60 | 279.72 | — | 212.54 | 0.60 |
| C | 70 | 275.39 | — | 191.73 | — |
| L | 10 | 254.89 | 1.77 | 250.53 | 1.30 |
| L | 20 | 252.71 | 1.24 | 243.04 | 1.02 |
| L | 30 | 252.89 | 1.88 | 233.76 | 0.85 |
| L | 40 | 254.98 | 2.11 | 223.95 | 1.15 |
| L | 50 | 257.17 | 1.68 | 211.89 | 1.23 |
| L | 60 | 255.38 | 0.90 | 188.90 | 0.64 |
| L | 70 | 244.93 | 0.92 | 154.99 | 1.00 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.45 | 9.12 | 10.21 | 12.56 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.7 | 26.4 | 23.3 | 22.7 | 23.9 | 23.2 |

Date: 7/8/81

Time: 1320-1410

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 284.25 | 0.77 | 283.83 | — |
| X | 20 | 283.27 | 0.68 | 278.67 | 0.23 |
| X | 30 | 286.45 | 0.86 | 276.99 | — |
| X | 40 | 288.81 | 0.69 | 266.28 | — |
| X | 50 | 292.40 | — | 257.69 | 0.75 |
| X | 60 | 293.04 | 0.62 | 242.75 | — |
| X | 70 | 286.56 | 0.88 | 221.81 | 0.59 |
| C | 10 | 280.27 | — | 280.43 | 0.85 |
| C | 20 | 281.39 | — | 275.68 | — |
| C | 30 | 282.91 | 0.61 | 273.17 | 1.01 |
| C | 40 | 286.62 | — | 264.82 | 0.65 |
| C | 50 | 291.16 | 0.57 | 255.52 | 1.12 |
| C | 60 | 292.43 | 0.21 | 239.63 | 0.54 |
| C | 70 | 284.73 | — | 216.39 | — |
| L | 10 | 263.02 | 1.29 | 259.67 | 1.22 |
| L | 20 | 270.31 | 1.93 | 265.42 | 1.23 |
| L | 30 | 266.89 | 5.38 | 252.24 | 3.37 |
| L | 40 | 261.66 | 1.40 | 234.82 | 1.38 |
| L | 50 | 265.11 | 4.04 | 221.11 | 1.31 |
| L | 60 | 268.47 | 3.99 | 200.03 | 1.16 |
| L | 70 | 250.09 | 1.41 | 168.67 | 1.38 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.14 | 11.12 | 14.32 | 15.27 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 33.8 | 38.0 | 32.0 | 31.5 | 31.9 | 28.9 |

Date: 7/8/81

Time: 1325-1350

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 284.25 | 0.77 | 283.83 | — |
| X | 20 | 283.27 | 0.68 | 278.67 | 0.23 |
| X | 30 | 286.45 | 0.86 | 276.99 | — |
| X | 40 | 288.81 | 0.69 | 266.28 | — |
| X | 50 | 292.40 | — | 257.69 | 0.75 |
| X | 60 | 293.04 | 0.62 | 242.75 | — |
| X | 70 | 286.56 | 0.88 | 221.81 | 0.59 |
| C | 10 | 280.27 | — | 280.43 | 0.85 |
| C | 20 | 281.39 | — | 275.68 | — |
| C | 30 | 282.91 | 0.61 | 273.17 | 1.01 |
| C | 40 | 286.62 | — | 264.82 | 0.65 |
| C | 50 | 291.16 | 0.57 | 255.52 | 1.12 |
| C | 60 | 292.43 | 0.21 | 239.63 | 0.54 |
| C | 70 | 284.73 | — | 216.39 | — |
| L | 10 | 263.02 | 1.29 | 259.67 | 1.22 |
| L | 20 | 270.31 | 1.93 | 265.42 | 1.23 |
| L | 30 | 266.89 | 5.38 | 252.24 | 3.37 |
| L | 40 | 261.66 | 1.40 | 234.82 | 1.38 |
| L | 50 | 265.11 | 4.04 | 221.11 | 1.31 |
| L | 60 | 268.47 | 3.99 | 200.03 | 1.16 |
| L | 70 | 250.09 | 1.41 | 168.67 | 1.38 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.14 | 11.12 | 14.32 | 15.27 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 33.8 | 38.0 | 32.0 | 31.5 | 31.9 | 28.9 |

Date: 7/30/81

Time: 0821-0850

Plot No.: 261

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 247.21 | — | 243.00 | 0.65 |
| X | 20 | 251.84 | — | 243.28 | 0.27 |
| X | 30 | 252.41 | — | 235.45 | — |
| X | 40 | 263.17 | 0.61 | 249.39 | 0.52 |
| X | 50 | 265.70 | 0.50 | 238.63 | 0.86 |
| X | 60 | 265.95 | 0.97 | 230.37 | 0.91 |
| X | 70 | 264.86 | 0.83 | 245.50 | 0.39 |
| C | 10 | 240.50 | 0.97 | 237.19 | 0.61 |
| C | 20 | 242.29 | 0.92 | 236.24 | 0.31 |
| C | 30 | 249.57 | — | 236.77 | 0.71 |
| C | 40 | 257.01 | — | 237.39 | 0.62 |
| C | 50 | 262.77 | 0.25 | 232.24 | 0.48 |
| C | 60 | 267.12 | 0.81 | 229.87 | — |
| C | 70 | 264.73 | 1.34 | 227.45 | 0.58 |
| L | 10 | 205.69 | 3.82 | 225.18 | 2.73 |
| L | 20 | 203.33 | 3.31 | 217.38 | 2.43 |
| L | 30 | 204.75 | 3.98 | 211.30 | 3.05 |
| L | 40 | 206.70 | 3.86 | 203.86 | 2.80 |
| L | 50 | 208.15 | 3.64 | 190.04 | 2.82 |
| L | 60 | 209.54 | 3.92 | 173.42 | 2.46 |
| L | 70 | 203.02 | — | 157.84 | — |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 11.38 | 15.40 | 14.53 | 16.25 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 17.9 | 16.2 | 17.9 | 16.4 | 18.1 | 18.5 |

Date: 7/30/81

Time: 1045-1110

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 260.48 | 1.27 | 259.34 | 1.24 |
| X | 20 | 259.74 | 1.07 | 253.93 | 1.28 |
| X | 30 | 264.64 | 0.69 | 252.05 | — |
| X | 40 | 271.37 | 0.42 | 251.95 | — |
| X | 50 | 275.53 | 0.81 | 242.49 | — |
| X | 60 | 277.33 | 0.32 | 235.08 | 0.94 |
| X | 70 | 278.74 | 1.07 | 214.91 | — |
| C | 10 | 253.85 | — | 253.08 | — |
| C | 20 | 254.58 | 1.17 | 250.85 | 0.34 |
| C | 30 | 258.99 | — | 249.02 | — |
| C | 40 | 266.05 | 0.81 | 245.34 | 0.17 |
| C | 50 | 271.50 | — | 240.46 | — |
| C | 60 | 276.42 | 0.23 | 235.03 | — |
| C | 70 | 274.57 | 0.48 | 231.80 | — |
| L | 10 | | | | |
| L | 20 | | | | |
| L | 30 | | | | |
| L | 40 | | | | |
| L | 50 | | | | |
| L | 60 | | | | |
| L | 70 | | | | |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 9.00 | 11.06 | 15.38 | 15.29 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 24.6 | 27.1 | 26.7 | 25.3 | 24.3 | 21.7 |

Date: 7/30/81

Time: 1405-1425

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | | | | |
| X | 20 | | | | |
| X | 30 | | | | |
| X | 40 | | | | |
| X | 50 | | | | |
| X | 60 | | | | |
| X | 70 | | | | |
| C | 10 | 277.29 | 0.88 | 278.71 | 0.22 |
| C | 20 | 278.48 | 1.01 | 275.85 | 0.61 |
| C | 30 | 279.20 | 0.76 | 272.47 | — |
| C | 40 | 282.31 | 0.63 | 267.03 | 1.06 |
| C | 50 | 285.37 | 0.70 | 260.39 | 0.26 |
| C | 60 | 285.96 | 0.25 | 252.70 | 0.95 |
| C | 70 | 280.31 | — | 243.92 | 0.61 |
| L | 10 | 263.89 | 1.68 | 260.39 | 1.32 |
| L | 20 | 268.13 | 1.70 | 254.90 | — |
| L | 30 | — | — | — | — |
| L | 40 | 267.61 | 1.48 | 238.08 | 1.50 |
| L | 50 | 265.70 | 1.94 | 226.06 | 0.87 |
| L | 60 | 265.09 | 1.62 | 211.05 | 1.24 |
| L | 70 | 255.70 | 1.48 | 193.61 | 1.25 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 8.83 | — | 15.23 | 17.41 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.5 | 34.6 | 29.1 | 28.7 | 29.0 | 25.7 |

Date: 7/30/81

Time: 1520-1545

Plot No.: 261

Field: Soybean (1)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | | | | |
| X | 20 | | | | |
| X | 30 | | | | |
| X | 40 | | | | |
| X | 50 | | | | |
| X | 60 | | | | |
| X | 70 | | | | |
| C | 10 | 279.39 | — | 279.75 | — |
| C | 20 | 281.24 | 0.87 | 277.65 | 0.37 |
| C | 30 | 283.76 | — | 274.59 | — |
| C | 40 | 287.26 | 0.26 | 271.56 | — |
| C | 50 | 288.95 | — | 267.26 | — |
| C | 60 | 287.71 | — | 262.62 | 0.86 |
| C | 70 | 280.13 | 0.45 | 254.07 | — |
| L | 10 | 264.41 | 0.87 | 258.41 | 1.52 |
| L | 20 | 263.59 | 1.41 | 254.17 | 1.11 |
| L | 30 | 266.69 | 1.59 | 249.30 | 1.06 |
| L | 40 | 267.37 | 1.90 | 240.79 | 1.06 |
| L | 50 | 266.95 | 1.59 | 229.80 | 5.95 |
| L | 60 | 263.68 | 1.84 | 212.21 | 1.19 |
| L | 70 | 253.65 | 1.72 | 191.32 | 1.06 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.01 | 10.18 | 14.00 | 17.11 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.4 | 39.2 | 36.5 | 32.9 | 32.0 | 27.4 |

Date: 7/31/81

Time: 0950-1015

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 274.32 | 0.79 | 275.59 | 0.24 |
| X | 20 | 272.89 | 0.44 | 271.82 | 0.53 |
| X | 30 | 274.77 | 0.85 | 269.60 | 0.94 |
| X | 40 | — | — | — | — |
| X | 50 | 275.40 | — | 255.72 | 0.48 |
| X | 60 | 275.77 | 0.43 | 246.35 | 0.74 |
| X | 70 | 274.15 | 0.46 | 236.97 | 0.49 |
| C | 10 | 266.00 | 0.66 | 267.09 | 0.90 |
| C | 20 | 266.26 | — | 263.97 | 0.26 |
| C | 30 | 269.57 | 0.78 | 261.22 | — |
| C | 40 | — | — | — | — |
| C | 50 | 278.72 | 0.78 | 250.92 | 0.63 |
| C | 60 | 281.67 | 0.44 | 245.57 | — |
| C | 70 | 278.01 | 0.69 | 238.89 | 0.75 |
| L | 10 | 259.88 | 1.25 | 257.99 | 1.20 |
| L | 20 | 258.41 | 1.72 | 250.62 | 0.78 |
| L | 30 | 260.23 | 2.06 | 245.76 | 1.12 |
| L | 40 | — | — | — | — |
| L | 50 | 261.70 | 1.37 | 226.90 | 1.32 |
| L | 60 | 261.21 | 0.94 | 213.03 | 1.12 |
| L | 70 | 253.53 | 1.78 | 203.06 | 0.89 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 9.10 | 11.38 | 15.79 | 15.67 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.5 | 25.8 | | 24.2 | 24.3 | 21.8 |

Date: 7/31/81

Time: 1110-1135

Plot No.: 261

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 282.26 | 0.86 | 281.79 | 1.13 |
| X | 20 | 281.54 | — | 280.13 | 0.60 |
| X | 30 | 281.72 | 0.71 | 278.16 | 0.72 |
| X | 40 | 282.63 | — | 276.58 | 1.13 |
| X | 50 | 283.31 | 0.85 | 274.56 | 1.15 |
| X | 60 | 279.06 | 0.67 | 269.01 | 0.84 |
| X | 70 | 276.21 | 0.75 | 261.26 | — |
| C | 10 | 272.09 | — | 273.13 | — |
| C | 20 | 274.62 | 0.60 | 271.44 | — |
| C | 30 | 278.52 | 0.41 | 269.83 | — |
| C | 40 | 282.27 | — | 267.88 | — |
| C | 50 | 284.75 | 0.99 | 264.97 | 1.07 |
| C | 60 | 285.49 | 0.19 | 260.31 | 0.54 |
| C | 70 | 277.97 | 0.38 | 254.20 | 0.66 |
| L | 10 | 259.81 | 2.00 | 254.12 | 1.30 |
| L | 20 | 256.63 | 1.74 | 246.06 | 1.20 |
| L | 30 | 263.08 | 1.64 | 244.27 | 0.62 |
| L | 40 | 263.58 | 1.53 | 237.70 | 1.50 |
| L | 50 | 265.22 | 1.58 | 228.81 | 1.10 |
| L | 60 | 261.12 | 1.32 | 213.91 | 1.49 |
| L | 70 | 251.53 | 1.30 | 195.90 | 0.80 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 7.07 | 8.56 | 13.13 | 15.03 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.6 | 26.3 | | 27.3 | 26.3 | 24.0 |

Date: 8/10/81

Time: 1045-1105

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 281.53 | — | 280.48 | 0.72 |
| X | 20 | 281.15 | — | 278.06 | — |
| X | 30 | 283.20 | 1.01 | 276.42 | 0.52 |
| X | 40 | 283.09 | 0.81 | 273.12 | — |
| X | 50 | 283.40 | — | 268.51 | — |
| X | 60 | 282.50 | 0.64 | 264.58 | — |
| X | 70 | 279.53 | 0.57 | 256.98 | 0.62 |
| C | 10 | 276.51 | 0.50 | 277.73 | 0.86 |
| C | 20 | 277.38 | 0.82 | 275.91 | 0.30 |
| C | 30 | 279.67 | — | 275.24 | — |
| C | 40 | 281.91 | — | 273.52 | 0.68 |
| C | 50 | 283.70 | 0.69 | 270.23 | 0.65 |
| C | 60 | 283.59 | — | 267.81 | 0.75 |
| C | 70 | 279.27 | 0.98 | 265.06 | 0.62 |
| L | 10 | 267.67 | 1.72 | 265.64 | 1.34 |
| L | 20 | 267.63 | 1.67 | 260.69 | 1.46 |
| L | 30 | — | — | — | — |
| L | 40 | 270.50 | 1.47 | 250.65 | 1.04 |
| L | 50 | 269.20 | 1.66 | 242.31 | 1.16 |
| L | 60 | 267.21 | 1.62 | 233.22 | 0.83 |
| L | 70 | 257.19 | 1.20 | 225.94 | 0.87 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.29 | 8.69 | 11.65 | 12.68 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 31.6 | 30.4 | 31.0 | 28.4 | 28.9 | 25.3 |

Date: 8/10/81

Time: 1116-1137

Plot No.: 261

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 282.28 | — | 281.54 | 0.88 |
| X | 20 | 284.38 | 0.44 | 282.03 | 0.55 |
| X | 30 | 285.29 | — | 281.05 | 0.50 |
| X | 40 | 285.19 | 0.97 | 280.55 | 0.56 |
| X | 50 | 283.91 | 1.01 | 277.21 | — |
| X | 60 | 280.74 | — | 270.12 | 0.51 |
| X | 70 | 276.94 | 0.55 | 263.48 | 0.45 |
| C | 10 | 278.96 | 0.65 | 279.08 | 0.78 |
| C | 20 | 281.21 | 0.41 | 279.14 | 0.72 |
| C | 30 | 283.46 | — | 279.53 | 0.59 |
| C | 40 | 285.39 | — | 277.56 | — |
| C | 50 | 286.04 | — | 275.45 | — |
| C | 60 | 284.13 | — | 272.59 | 0.33 |
| C | 70 | 277.19 | — | 266.98 | — |
| L | 10 | 266.95 | 1.59 | 262.29 | 1.02 |
| L | 20 | 268.94 | 1.71 | 260.21 | 1.74 |
| L | 30 | 270.32 | 1.74 | 255.33 | 1.01 |
| L | 40 | 269.41 | 1.76 | 248.09 | 1.18 |
| L | 50 | 267.99 | 1.71 | 238.67 | 1.20 |
| L | 60 | 264.61 | 1.60 | 230.21 | 1.25 |
| L | 70 | 254.26 | 1.81 | 215.72 | 0.97 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 4.14 | 8.27 | 12.17 | 13.31 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 32.5 | 32.9 | 34.8 | 31.6 | 30.2 | 26.6 |

Date: 8/11/81

Time: 1010-1032

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 275.32 | — | 273.63 | 0.54 |
| X | 20 | 274.34 | 0.95 | 269.68 | — |
| X | 30 | 276.57 | 0.66 | 267.92 | 0.57 |
| X | 40 | 279.75 | 0.98 | 264.74 | — |
| X | 50 | 278.65 | 0.81 | 260.40 | 0.59 |
| X | 60 | 282.03 | 0.41 | 250.01 | — |
| X | 70 | 277.82 | 1.35 | 241.89 | 0.63 |
| C | 10 | 276.51 | — | 276.79 | — |
| C | 20 | 275.60 | 0.72 | 273.58 | 0.34 |
| C | 30 | 277.52 | — | 272.60 | — |
| C | 40 | 280.21 | 0.88 | 270.35 | — |
| C | 50 | 282.06 | — | 267.87 | 0.88 |
| C | 60 | 282.29 | — | 265.81 | — |
| C | 70 | 277.58 | — | 262.20 | 0.46 |
| L | 10 | 270.02 | 1.79 | 268.66 | 1.73 |
| L | 20 | 269.25 | 2.13 | 261.48 | 1.39 |
| L | 30 | 270.75 | 0.88 | 256.84 | 1.58 |
| L | 40 | 271.41 | 1.46 | 250.70 | 1.45 |
| L | 50 | 270.59 | 2.06 | 244.37 | 1.16 |
| L | 60 | 267.80 | 1.60 | 234.06 | 1.31 |
| L | 70 | 257.02 | 1.67 | 226.22 | 1.33 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 6.25 | 6.73 | 10.56 | 11.47 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 29.8 | 32.1 | 28.7 | 26.1 | 26.8 | 24.6 |

Date: 8/11/81

Time: 1136-1200

Plot No.: 261

Field: Soybean (1)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 273.23 | 0.76 | 272.19 | 0.79 |
| X | 20 | 275.46 | 1.02 | 273.32 | — |
| X | 30 | 276.93 | 0.40 | 273.35 | 0.67 |
| X | 40 | 277.62 | 0.41 | 271.28 | 0.55 |
| X | 50 | 277.92 | 1.14 | 269.08 | 0.69 |
| X | 60 | 275.72 | 0.46 | 264.68 | 1.24 |
| X | 70 | 272.02 | 0.94 | 258.32 | — |
| C | 10 | 272.37 | — | 272.22 | — |
| C | 20 | 274.71 | 0.22 | 273.11 | 0.43 |
| C | 30 | 277.94 | — | 272.50 | — |
| C | 40 | 281.23 | — | 272.76 | 0.82 |
| C | 50 | 282.59 | 0.97 | 271.35 | 0.15 |
| C | 60 | 281.31 | — | 269.80 | 0.58 |
| C | 70 | 275.34 | 0.53 | 262.98 | 0.72 |
| L | 10 | 268.35 | 2.09 | 264.89 | 1.53 |
| L | 20 | 271.88 | 1.72 | 262.95 | 0.91 |
| L | 30 | 271.73 | 1.48 | 257.47 | 1.48 |
| L | 40 | 271.56 | 1.38 | 252.20 | 1.17 |
| L | 50 | 270.15 | 1.72 | 242.65 | 1.36 |
| L | 60 | 265.05 | 2.03 | 233.90 | 1.32 |
| L | 70 | 255.88 | 1.42 | 219.94 | 1.19 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 5.17 | 9.06 | 13.85 | 15.50 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.6 | 30.6 | 29.9 | 28.9 | 29.5 | 26.5 |

Date: 8/13/81

Time: 1005-1032

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 253.14 | 0.10 | 252.07 | — |
| X | 20 | 250.35 | 1.17 | 245.44 | 0.80 |
| X | 30 | 253.88 | 0.54 | 244.74 | — |
| X | 40 | 261.46 | 0.54 | 247.39 | — |
| X | 50 | 262.17 | 0.38 | 240.30 | — |
| X | 60 | 267.24 | 0.62 | 240.26 | — |
| X | 70 | 268.23 | — | 245.11 | 0.75 |
| C | 10 | 244.21 | — | 244.38 | — |
| C | 20 | 244.86 | 0.90 | 241.64 | — |
| C | 30 | 249.10 | 0.55 | 242.30 | — |
| C | 40 | 263.76 | — | 243.64 | — |
| C | 50 | 261.91 | 0.26 | 244.29 | — |
| C | 60 | 267.33 | 0.72 | 247.28 | — |
| C | 70 | 268.13 | 0.48 | 249.09 | 0.61 |
| L | 10 | 234.53 | 1.68 | 234.47 | 1.03 |
| L | 20 | 231.60 | 1.67 | 222.08 | 1.13 |
| L | 30 | 236.25 | 1.76 | 216.77 | 1.10 |
| L | 40 | 246.52 | 1.64 | 219.43 | 0.90 |
| L | 50 | 248.38 | 1.55 | 205.61 | 1.73 |
| L | 60 | 250.47 | 2.01 | 202.29 | 1.37 |
| L | 70 | 248.20 | 1.71 | 206.42 | 1.15 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 17.38 | 16.78 | 15.07 | 14.96 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.8 | 24.5 | 25.0 | 23.0 | 23.8 | 21.7 |

Date: 8/13/81

Time: 1145-1210

Plot No.: 261

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 252.03 | — | 247.95 | 0.81 |
| X | 20 | 262.06 | — | 257.66 | 0.94 |
| X | 30 | 270.08 | — | 266.00 | — |
| X | 40 | 271.05 | 0.50 | 263.96 | 0.85 |
| X | 50 | 273.19 | 0.36 | 264.31 | — |
| X | 60 | 274.43 | — | 263.26 | 1.30 |
| X | 70 | 272.00 | 0.41 | 257.85 | 0.10 |
| C | 10 | 248.69 | 0.91 | 244.42 | 0.63 |
| C | 20 | 251.99 | 0.86 | 248.57 | 0.41 |
| C | 30 | 259.49 | 0.88 | 254.27 | — |
| C | 40 | 266.37 | 0.82 | 257.96 | — |
| C | 50 | 270.92 | — | 258.72 | 0.30 |
| C | 60 | 273.63 | — | 260.23 | 0.37 |
| C | 70 | 270.28 | 0.45 | 258.67 | 0.47 |
| L | 10 | 238.66 | 1.22 | 229.73 | 1.29 |
| L | 20 | 236.83 | 1.94 | 221.31 | 0.75 |
| L | 30 | 243.31 | 1.34 | 217.76 | 1.14 |
| L | 40 | 247.84 | 1.61 | 212.65 | 1.04 |
| L | 50 | 252.20 | 1.69 | 205.51 | 1.42 |
| L | 60 | 251.59 | 1.81 | 198.56 | 1.49 |
| L | 70 | 248.29 | 1.63 | 195.11 | 1.01 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 17.61 | 16.84 | 17.37 | 17.51 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 28.6 | 29.4 | 28.7 | 26.9 | 27.7 | 23.8 |

Date: 8/14/81

Time: 1005-1025

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 267.65 | — | 266.29 | 1.05 |
| X | 20 | 253.29 | 0.52 | 247.63 | — |
| X | 30 | 260.13 | 0.68 | 250.08 | — |
| X | 40 | 266.14 | 0.63 | 250.23 | — |
| X | 50 | 271.98 | 0.80 | 249.32 | 0.64 |
| X | 60 | 275.91 | 0.85 | 250.09 | — |
| X | 70 | 274.60 | 0.58 | 254.01 | 0.24 |
| C | 10 | 261.41 | 0.18 | 263.89 | — |
| C | 20 | 262.02 | 0.69 | 261.11 | — |
| C | 30 | 264.73 | — | 260.16 | — |
| C | 40 | 268.15 | — | 260.04 | 0.33 |
| C | 50 | 272.17 | 0.66 | 259.28 | 1.12 |
| C | 60 | 276.46 | 0.39 | 258.33 | 1.06 |
| C | 70 | 273.17 | 0.81 | 258.89 | 0.91 |
| L | 10 | 251.46 | 1.43 | 249.43 | 0.99 |
| L | 20 | 249.86 | 1.37 | 242.78 | 1.18 |
| L | 30 | 254.20 | 2.08 | 238.41 | 1.34 |
| L | 40 | 256.47 | 1.71 | 230.42 | 1.24 |
| L | 50 | 258.76 | 1.89 | 223.71 | 0.78 |
| L | 60 | 258.63 | 1.39 | 218.81 | 1.37 |
| L | 70 | 251.48 | 1.71 | 218.79 | 0.91 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 13.77 | 14.20 | 13.07 | 14.36 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 27.8 | 27.0 | 23.6 | 22.7 | 24.2 | 23.4 |

Date: 8/14/81

Time: 1130-1150

Plot No.: 261

Field: Soybean (1)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 267.78 | — | 266.22 | — |
| X | 20 | 271.15 | 0.96 | 269.03 | — |
| X | 30 | 279.19 | — | 276.49 | 0.95 |
| X | 40 | 279.32 | 0.96 | 273.21 | 0.56 |
| X | 50 | 277.47 | 0.85 | 271.26 | 0.44 |
| X | 60 | 276.09 | — | 268.41 | 0.76 |
| X | 70 | 272.18 | 1.14 | 260.86 | — |
| C | 10 | 260.98 | 0.24 | 260.03 | 0.87 |
| C | 20 | 263.56 | — | 259.81 | — |
| C | 30 | 270.54 | — | 263.99 | 0.65 |
| C | 40 | 274.34 | 0.65 | 264.70 | 0.34 |
| C | 50 | 277.06 | 0.95 | 264.10 | — |
| C | 60 | 278.31 | — | 265.08 | — |
| C | 70 | 273.65 | 0.45 | 262.44 | 0.95 |
| L | 10 | 252.35 | 0.82 | 245.94 | 1.20 |
| L | 20 | 252.89 | 1.62 | 238.53 | 1.24 |
| L | 30 | 260.39 | 1.77 | 239.12 | 1.06 |
| L | 40 | 261.41 | 1.99 | 232.37 | 0.94 |
| L | 50 | 259.83 | 1.27 | 222.06 | 1.07 |
| L | 60 | 258.46 | 1.73 | 216.63 | 0.70 |
| L | 70 | 252.41 | 1.53 | 210.27 | 0.88 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 15.52 | 13.68 | 15.27 | 14.17 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 30.6 | 28.9 | 30.6 | 27.9 | 28.2 | 26.0 |

Date: 8/17/81

Time: 1020-1045

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 267.66 | 1.00 | 266.58 | 0.47 |
| X | 20 | 264.78 | — | 262.86 | 0.62 |
| X | 30 | 267.47 | 1.17 | 261.90 | 0.77 |
| X | 40 | 270.85 | — | 261.05 | 0.34 |
| X | 50 | 272.92 | 1.18 | 258.01 | 1.15 |
| X | 60 | 273.28 | 1.04 | 254.69 | 0.55 |
| X | 70 | 270.90 | — | 255.36 | 0.75 |
| C | 10 | 265.32 | — | 266.45 | — |
| C | 20 | 266.04 | — | 265.37 | 0.56 |
| C | 30 | 268.19 | 0.68 | 264.53 | 0.73 |
| C | 40 | 270.30 | — | 263.57 | — |
| C | 50 | 272.57 | 1.08 | 262.77 | 0.83 |
| C | 60 | 272.87 | 0.85 | 261.89 | 0.99 |
| C | 70 | 268.19 | 1.03 | 259.26 | 0.79 |
| L | 10 | 254.61 | 1.21 | 254.46 | 1.43 |
| L | 20 | 256.10 | 1.49 | 250.53 | 1.49 |
| L | 30 | 258.12 | 0.97 | 244.66 | 0.45 |
| L | 40 | 259.08 | 2.01 | 238.36 | 1.32 |
| L | 50 | 258.99 | 1.65 | 232.53 | 0.94 |
| L | 60 | 257.86 | 1.89 | 224.96 | 1.08 |
| L | 70 | 246.87 | 3.32 | 224.33 | 1.07 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 11.02 | 14.05 | 15.25 | 16.40 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 20.3 | 19.7 | 17.8 | 18.0 | 20.9 | 21.1 |

Date: 8/17/81

Time: 1150-1215

Plot No.: 261

Field: Soybean (L)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 271.04 | — | 271.54 | 0.76 |
| X | 20 | 271.65 | 1.14 | 271.91 | — |
| X | 30 | 273.49 | — | 272.28 | — |
| X | 40 | 272.55 | 0.54 | 270.37 | 0.60 |
| X | 50 | 273.81 | 0.75 | 267.38 | 0.49 |
| X | 60 | 272.54 | 1.24 | 265.39 | 0.75 |
| X | 70 | 267.53 | 0.54 | 258.93 | 1.45 |
| C | 10 | 267.23 | 0.79 | 267.74 | 0.87 |
| C | 20 | 270.50 | 0.86 | 268.30 | 0.71 |
| C | 30 | 272.80 | — | 268.62 | — |
| C | 40 | 276.00 | 0.39 | 269.55 | 0.48 |
| C | 50 | 276.82 | 0.70 | 269.45 | — |
| C | 60 | 276.44 | 0.91 | 268.15 | — |
| C | 70 | 270.44 | — | 262.42 | 1.01 |
| L | 10 | 260.10 | 1.59 | 254.10 | 1.35 |
| L | 20 | 259.42 | 2.06 | 248.10 | 1.16 |
| L | 30 | 263.21 | 1.80 | 245.32 | 1.11 |
| L | 40 | 261.90 | 1.93 | 239.93 | 1.39 |
| L | 50 | 263.23 | 1.65 | 234.67 | 1.48 |
| L | 60 | 259.41 | 1.83 | 226.69 | 1.34 |
| L | 70 | 250.25 | 1.38 | 219.72 | 1.11 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 11.90 | 13.70 | 14.04 | 13.77 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 22.3 | 23.5 | 26.7 | 25.5 | 26.5 | 24.5 |

Date: 8/18/81

Time: 1240-1308

Plot No.: 261

Field: Soybean (II)

| Freq. | Angle | Average A.T.(V) | Standard Dev.(V) | Average A.T.(H) | Standard Dev.(H) |
|-------|-------|--------------------|---------------------|--------------------|---------------------|
| X | 10 | 284.25 | 0.96 | 283.44 | — |
| X | 20 | 283.78 | 1.07 | 281.97 | — |
| X | 30 | 284.25 | — | 279.72 | 0.49 |
| X | 40 | 285.46 | — | 278.32 | 0.32 |
| X | 50 | 283.54 | — | 275.75 | 0.65 |
| X | 60 | 283.48 | 0.92 | 271.48 | 0.71 |
| X | 70 | 278.97 | — | 268.59 | 0.51 |
| C | 10 | 279.24 | — | 280.80 | 0.67 |
| C | 20 | 279.95 | 0.75 | 280.57 | 0.38 |
| C | 30 | 281.90 | — | 280.21 | — |
| C | 40 | 282.69 | — | 278.48 | 0.73 |
| C | 50 | 283.00 | 0.73 | 276.32 | — |
| C | 60 | 281.12 | — | 273.47 | — |
| C | 70 | 276.27 | — | 269.86 | — |
| L | 10 | 264.03 | 1.83 | 263.62 | 1.47 |
| L | 20 | 265.27 | 1.45 | 263.32 | 1.53 |
| L | 30 | 266.20 | 1.43 | 255.35 | 1.10 |
| L | 40 | 266.25 | 1.74 | 249.89 | 1.35 |
| L | 50 | 265.01 | 1.55 | 243.05 | 1.42 |
| L | 60 | 262.45 | 1.31 | 237.47 | 1.20 |
| L | 70 | 252.83 | 2.12 | 234.30 | 1.30 |
| P | 10 | | | | |
| P | 20 | | | | |
| P | 30 | | | | |
| P | 40 | | | | |
| P | 50 | | | | |
| P | 60 | | | | |
| P | 70 | | | | |

Soil Moisture Data (% by Dry Weight)

| 0-0.50 cm | 0-2.50 cm | 2.5-5.0 cm | 5-10 cm |
|-----------|-----------|------------|---------|
| 9.35 | 11.49 | 13.45 | 13.97 |

Soil Temperature Data (°C)

| Ambient | +2.5 cm | 1.25 cm | 2.5 cm | 7.5 cm | 15.0 cm |
|---------|---------|---------|--------|--------|---------|
| 26.9 | 25.5 | 22.7 | 21.3 | 22.8 | 25.5 |